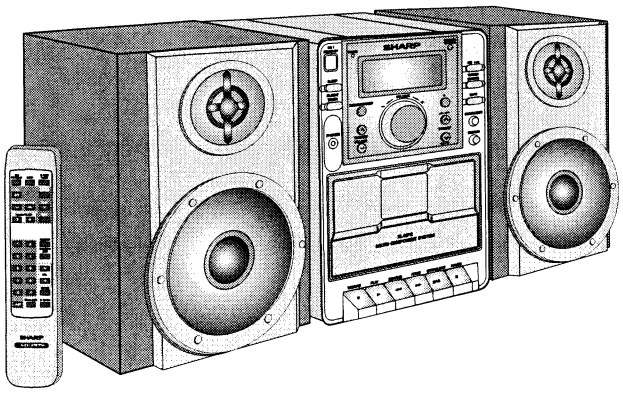
SHARP SERVICE MANUAL

No.S8628XLMP2H//



MICRO COMPONENT SYSTEM

MODEL XL-MP2H

XL-MP2H Micro Component System consisting of XL-MP2H (main unit) and CP-MP2H (speaker system).

- In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified be used.

COMPACT disc DIGITAL AUDIO | Plays Windows Media™ | 4-MODE PRESET EQUALIZER | ENERGY | SAVING ENERGY STAND-BY POWER CONSUMPTION 0.6w | MP3 | CD-R/RW Playable

CONTENTS

PRECAUTIONS FOR USING LEAD-FREE SOLDER

CHAPTER 1. GENERAL DESCRIPTION
[1] Safety Precaution For Service Manual 1-1
[2] Specifications 1-2
[3] Names Of Parts 1-3

CHAPTER 2. ADJUSTMENTS
[1] Tuner Adjustments 2-1
[2] Arrangement Of Adjustments Positions 2-2

CHAPTER 3. MECHANICAL DESCRIPTION
[1] Disassembly 3-1

CHAPTER 4. DIAGRAMS
[1] Block Diagram 4-1

CHAPTER 5. CIRCUIT DESCRIPTION
[1] Waveforms Of Servo Circuit 5-1
[2] Voltage 5-3

CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT
[1] Notes On Schematic Diagram 6-1
[2] Types Of Transistor And LED 6-1
[3] Schematic Diagram 6-2
[4] Wiring Side Of PWB 6-12

CHAPTER 7. FLOWCHART
[1] Troubleshooting 7-1

CHAPTER 8. OTHERS
[1] Funtion Table Of IC 8-1
[2] LCD Display 8-14

PARTS GUIDE

Parts marked with " ⚠ " are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

PRECAUTIONS FOR USING LEAD-FREE SOLDER

1. Employing lead-free solder

"AUDIO, CONTROL, RECTIFIER, CD, MCU, USB PWB" of this model employs lead-free solder.
The LF symbol indicates lead-free solder, and is attached on the PWB and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example: LFa

Sn-Ag-Cu Indicates lead-free solder of tin, silver and copper.

2. Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.
As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

3. Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C,and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, since the land may be peeled of for the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.
Lead-free solder contains more tin, and the end of the soldering bit may be easily corrected. Make sure to turn on and off the power of the bit as required. If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.
When the tip of the soldering bit is blackened during use, file it with steel wool or fine sand paper.
Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

Ref No.	Parts No.	Description
PWB-A1	92LUH400280029	AUDIO
PWB-A2	92LUH400380003	CONTROL
PWB-A3	92LUH401280000	RECTIFIER
PWB-B	92LUH400980000	CD
PWB-C	92LUH403280000	MCU
PWB-D	92LUH403080000	USB

CHAPTER 1. GENERAL DESCRIPTION

[1] Safety Precaution For Service Manual

Precaution to be taken when replacing and servicing the Laser Pickup.

WARNINGS

THE AEL (ACCESSIBLE EMISSION LEVEL) OF THE LASER POWER OUTPUT IS LESS THAN CLASS 1 BUT THE LASER COMPONENT IS CAPABLE OF EMITTING RADIATION EXCEEDING THE LIMIT FOR CLASS 1. THEREFORE IT IS IMPORTANT THAT THE FOLLOWING PRECAUTIONS ARE OBSERVED DURING SERVICING TO PROTECT YOUR EYES AGAINST EXPOSURE TO THE LASER BEAM.

1-WHEN THE CABINET IS REMOVED, THE POWER IS TURNED ON WITHOUT A COMPACT DISC IN POSITION AND THE PICKUP IS ON THE OUTER EDGE THE LASER WILL LIGHT FOR SEVERAL SECONDS TO DETECT A DISC. DO NOT LOOK INTO THE PICKUP LENS.

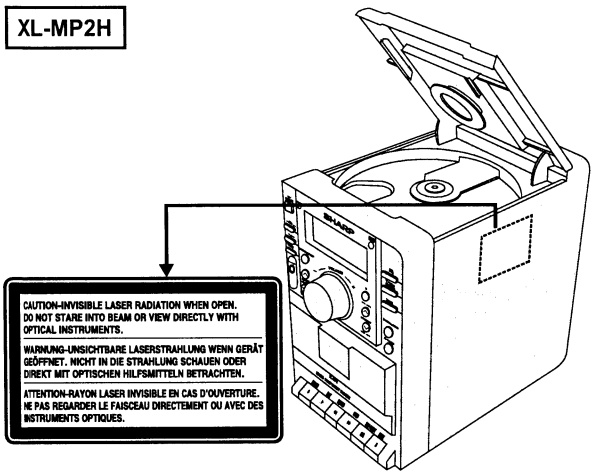
2-THE LASER POWER OUTPUT OF THE PICKUP UNIT AND REPLACEMENT SERVICE PARTS ARE ALL FACTORY PRESET BEFORE SHIPMENT.
DO NOT ATTEMPT TO READJUST THE LASER PICKUP UNIT DURING REPLACEMENT OR SERVICING.

3-UNDER NO CIRCUMSTANCES STARE INTO THE PICKUP LENS AT ANY TIME.

4-CAUTION-USE OF CONTROLS OR ADJUSTMENTS, OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

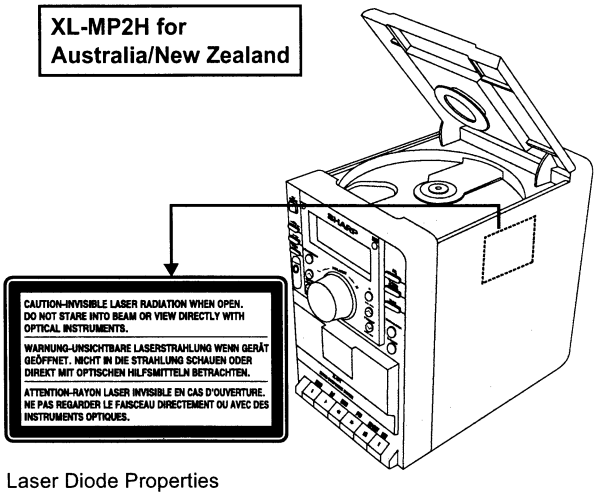
This product is classified as a CLASS 1 LASER PRODUCT.

XL-MP2H


CAUTION-INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.
WARNUNG-UNSICHTBARE LASERSTRAHLUNG WENN GERÄT GEÖFFNET. NICHT IN DIE STRAHLUNG SCHAUEN ODER DIREKT MIT OPTISCHEN HILFSMITTELN BETRACHTEN.
ATTENTION-RAYON LASER INVISIBLE EN CAS D'OUVERTURE. NE PAS REGARDER LE FAISCEAU DIRECTEMENT OU AVEC DES INSTRUMENTS OPTIQUES.

Laser Diode Properties
Material: GaAlAs
Wavelength: 790 nm
Emission Duration: continuous
Laser Output: max. 0.6 mW

XL-MP2H for Australia/New Zealand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Laser Diode Properties
Material: GaAlAs
Wavelength: 790 nm
Emission Duration: continuous
Laser Output: max. 0.6 mW

ADVERSEL-SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. SE IKKE IND I STRÅLEN-HELLER IKKE MED OPTISKE INSTRUMENTER.

VARO! AVATTAESSA OLET ALTTIINA NÄKYVÄLLE JA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE ÄLÄ TUIJOTA SÄTEESEEN ÄLÄKÄ KATSO SITÄ OPTISEN LAITTEEN LÄPI.

VARNING-SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STIRRA EJ IN I STRÅLEN OCH BETRAKTA EJ STRÅLEN GENOM OPTISKT INSTRUMENT.

VAROITUS! LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VARNING - OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERAS. KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASER-STRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

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For other countries:
Audio-visual material may consist of copyrighted works which must not be recorded without the authority of the owner of the copyright. Please refer to the relevant laws in your country.

[2] Specifications

XL-MP2H

■ General

Power source	AC 230 V, 50 Hz
Power consumption	Power on: 18 W Power stand-by: 0.6 W(*)
Dimensions	Width: 138 mm (5-7/16") Height: 212 mm (8-11/32") Depth: 218 mm (8-19/32")
Weight	2.6 kg (5.6 lbs.)

(*)This power consumption value is obtained when the unit is in the power stand-by mode.

■ Amplifier

Output power	PMPO: 26 W (total) MPO: 13 W (6.5 W + 6.5 W) (DIN 45 324) RMS: 10 W (5 W + 5W) (DIN 45 324)
Output terminals	Speakers: 4 ohms Headphones: 16 - 50 ohms (recommended: 32 ohms)

■ Tuner

Frequency range	FM: 87.5 - 108MHz AM: 522 - 1,620kHz

■ CD player

Type	Compact disc player
Signal readout	Non-contact, 3-beam semi conductor laser pickup
D/A converter	1-bit D/A converter
Frequency response	20 - 20,000Hz
Dynamic range	90 dB (1kHz)

■ Cassette deck

Frequency response	80 - 8,000 Hz (normal tape)
Signal/noise ratio	50 dB (recording/playback)
Wow and flutter	0.35% (DIN 45 511)

■ Speaker

Type	2-way type speaker system
Maximum input power	10 W
Rated input power	5 W
Impedance	4 ohms
Dimensions	Width: 135 mm (5-5/16") Height: 211 mm (8-5/16") Depth: 180 mm (7-3/32")
Weight	1.5 kg (3.3 lbs.)/each

XL-MP2H for Australia/New Zealand

■ General

Power source	AC 230 ~240V, 50 Hz
Power consumption	Power on: 18 W Power stand-by: 0.6 W(*)
Dimensions	Width: 138 mm (5-7/16") Height: 212 mm (8-11/32") Depth: 218 mm (8-19/32")
Weight	2.6 kg (5.6 lbs.)

(*)This power consumption value is obtained when the unit is in the power stand-by mode.

■ Amplifier

Output power	PMPO: 26 W (total) MPO: 13 W (6.5 W + 6.5 W) (10% T.H.D.) RMS: 10 W (5 W + 5W) (10% T.H.D.)
Output terminals	Speakers: 4 ohms Headphones: 16 - 50 ohms (recommended: 32 ohms)

■ Tuner

Frequency range	FM: 87.5 - 108.0 MHz AM: 522 - 1,620 kHz

■ CD player

Type	Compact disc player
Signal readout	Non-contact, 3-beam semi conductor laser pickup
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Dynamic range	90 dB (1kHz)

■ Cassette deck

Frequency response	80 - 8,000 Hz (normal tape)
Signal/noise ratio	50 dB (recording/playback)
Wow and flutter	0.35% (WRMS)

■ Speaker

Type	2-way type speaker system
Maximum input power	10 W
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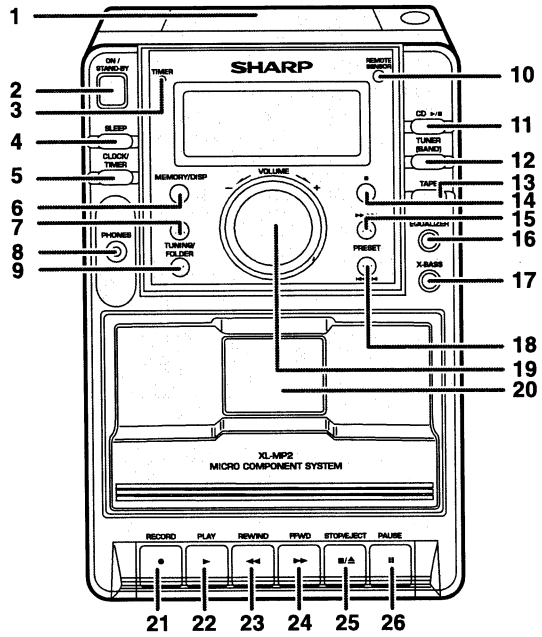
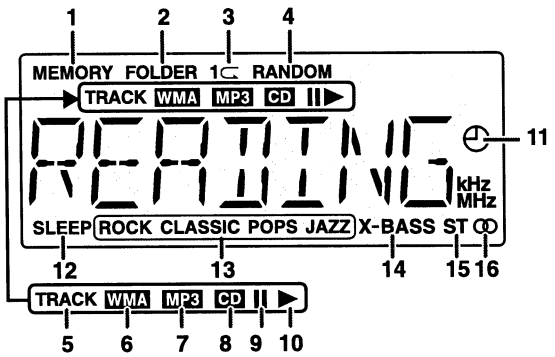
Impedance	4 ohms
Dimensions	Width: 135 mm (5-5/16") Height: 211 mm (8-5/16") Depth: 180 mm (7-3/32")
Weight	1.5 kg (3.3 lbs.)/each

[3] Names Of Parts



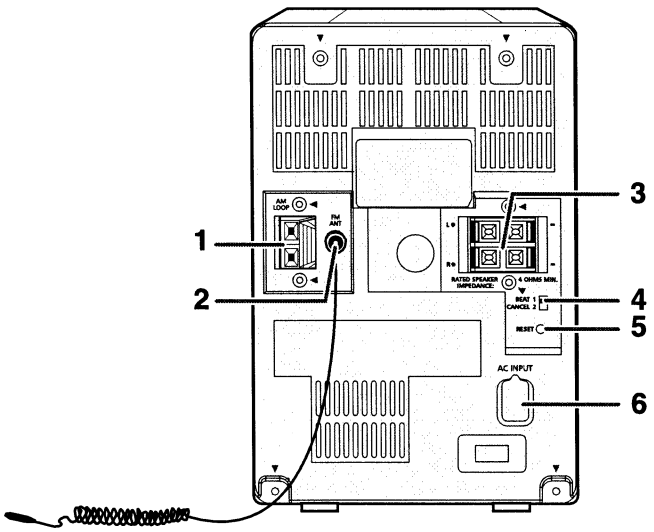
■ Front panel

1. CD Door
2. On/Stand-By Button
3. Timer Indicator
4. Sleep Button
5. Clock/Timer Button
6. Memory/Disp Button
7. Tuning Up/Folder Up Button
8. Headphone Socket
9. Tuning Down/Folder Down Button
10. Remote Sensor
11. CD Play/Pause Button
12. Tuner (Band) Button
13. Tape Button
14. Stop Button
15. Disc Track Up or Fast Forward, Tuner Preset Up, Time Up Button
16. Equaliser Button
17. Extra Bass Button
18. Disc Track Down or Fast Reverse, Tuner Preset Down, Time Down Button
19. Volume Control
20. Cassette Compartment
21. Tape Record Button
22. Tape Play Button
23. Tape Rewind Button
24. Tape Fast Forward Button
25. Tape Stop/Eject Button
26. Tape Pause Button



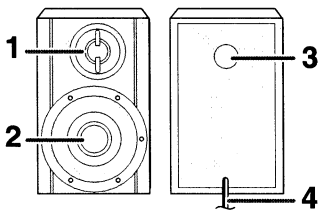
■ Display

1. Memory Indicator
2. MP3/WMA Folder Indicator
3. Disc Repeat Indicator
4. Random Indicator
5. MP3/WMA Track Indicator
6. WMA Indicator
7. MP3 Indicator
8. CD Indicator
9. Disc Pause Indicator
10. Disc Play Indicator
11. Timer Play Indicator
12. Sleep Indicator
13. Equaliser (ROCK, CLASSIC, POPS, JAZZ) Indicator
14. Extra Bass Indicator
15. FM Stereo Mode Indicator
16. FM Stereo Receiving Indicator



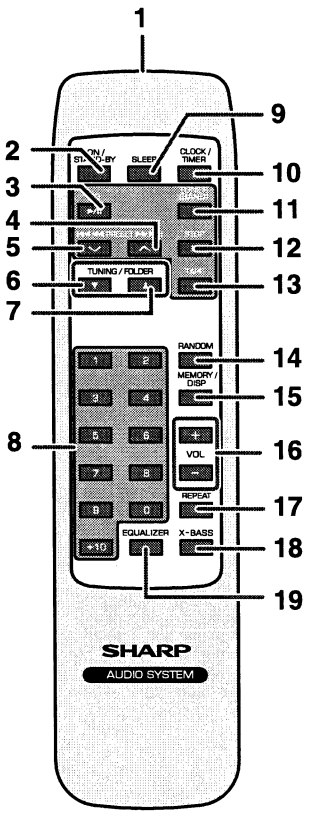
■ Rear panel

1. AM Loop Aerial Sockets
2. FM Aerial Wire
3. Speaker Terminals
4. Beat Cancel Switch
5. Reset Button
6. AC Input Socket



■ Speaker system

1. Tweeter
2. Woofer
3. Bass Reflex Duct
4. Speaker Wire



■ Remote control

1. Remote Control Transmitter
2. On/Stand-by Button
3. CD Play/Pause Button
4. Disc Track Up or Fast Forward, Tuner Preset Up, Time Up Button
5. Disc Track Down or Fast Reverse, Tuner Preset Down, Time Down Button
6. Tuning Down/Folder Down Button
7. Tuning Up/Folder Up Button
8. Disc Direct Search Buttons
9. Sleep Button
10. Clock/Timer Button
11. Tuner (Band) Button
12. Disc Stop Button
13. Tape Button
14. Random Button
15. Memory/Disp Button
16. Volume Up and Down Buttons
17. Repeat Button
18. Extra Bass Button
19. Equaliser Button

CHAPTER 2. ADJUSTMENTS

[1] Tuner Adjustments

Use a plastic screw driver for adjustments.

Adjust the intermediate frequency of AM and FM to the frequency of ceramic filter.

Set of unit

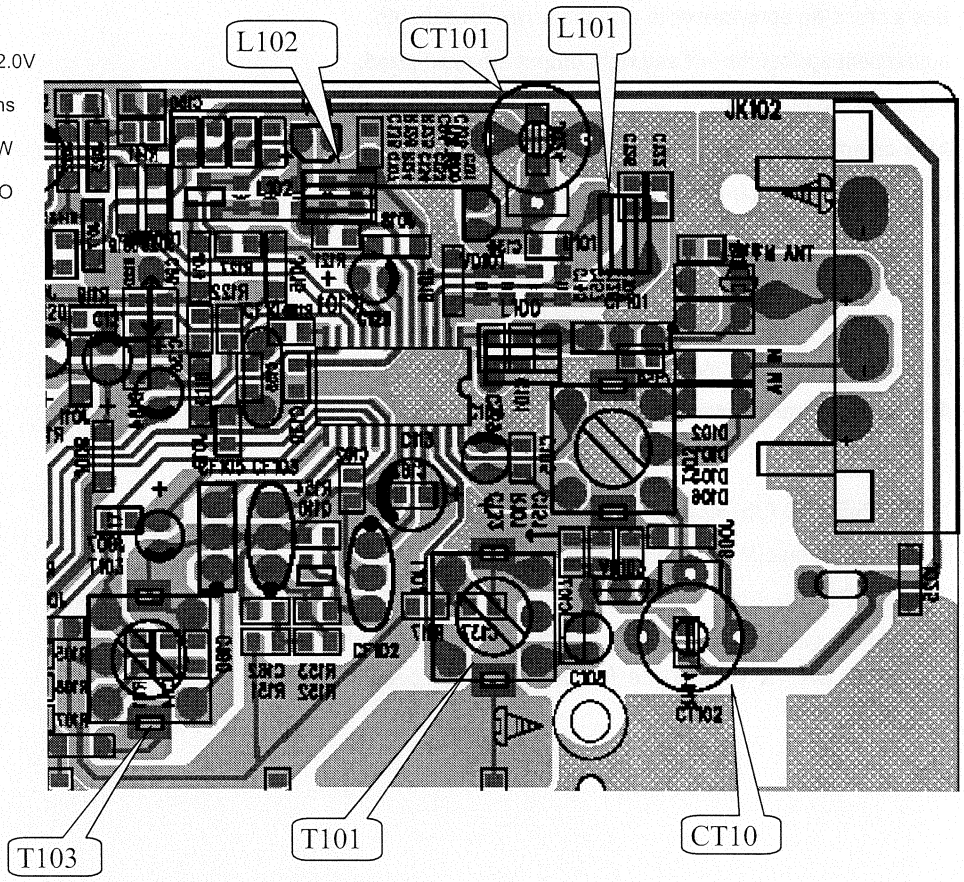
Supply voltage : DC 12.0V

speaker impedance : 4 ohms

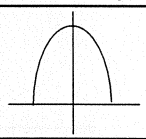
standard output : 50 mW

Function switch : RADIO

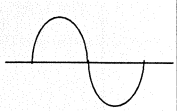
a. Parts Location



a.AM Adjustment Band switch:MW

Step	Adjusting Circuit	Connections		SG Frequency	Position of Tuning dial	Adjustment	VTVM Oscilloscope
		Input	Output				
1	IF	Closed the output termial by sweep generator,it place to MW ANT	Connect sweep generator to IC101(17) PIN(A)	450 KHz	Low	T103	
2	Tuning coverage	Connect AM SG to test loop	Connect VTVM to speaker terminals.	522 KHz	Low end	T101	1.3V-1.4V
3				1629 KHz	High end		7.2V-7.5V
4	Tracking	Connect AM SG to test loop	Connect VTVM to speaker terminals.	600 KHz	600 KHz	MW ANT COIL	Max.
5				1400 KHz	1400 KHz	CT102	Max.

b.FM Adjustment Band switch:FM FM Dummy antenna: 75 ohms unbalance

Step	Adjusting Circuit	Connection		SG Frequency	Position of Tuning dial	Adjustment	VTVM Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to IC101(24)pin (B)	Connect VTVM to generator to IC101 (17) pin (A)	10.7 MHz	Low		
2	Tuning coverage	Connect FM SG to FM.ANT & D101(-)	Connect VTVM to speaker terminals.	87.5 MHz	Low end	L102	2.0V-2.1V
3				108 MHz	High end	CT101	6.0V-6.1V
4	Tracking	Connect FM SG to FM.ANT & D101(-)	Connect VTVM to speaker terminals.	90 MHz	90 MHz	L101	Max.
5				106.0 MHz	106.0 MHz		Max.

[2] Arrangement Of Adjustments Positions

1 HEAD AZIMUTH ADJUSTMET

(1) Load the test tape TCC-182A 8KHz for azimuth adjustment.

(2) Press the PLAY button.

(3) Use a cross-tip screwdriver to turn the screw for azimuth adjustment so that the left and right output are maximized.

(4) Press the STOP button.

(5) After completion of the adjustment. Use thread lock(TB-1401B) to secure the azimuth-adjustment screw.

2 AC BIAS FREQUENCY ADJUSTMENTS

(1) Connect frequency counter to CN201(BS);

(2) R/P swith in recording state;

(3) Adjusting T201 use a plastic screwdriver, AC bias frepuency;62+-1KHZ.

3 TAPE SPEED ADJUSTMENT

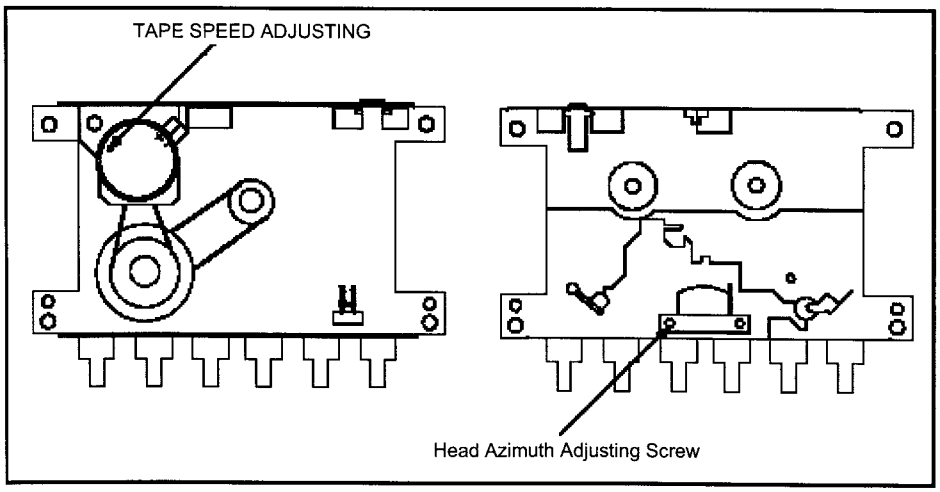
(1) Insert the test tape(MTT-111N,3,000 HZ).

(2) Press the PLAY button.

(3) Use a flat-tip screwdriver to turn the MOTOR VR adjust MOTOR VR so that the frequency counter become 3,000Hz.

CASSETTE MECHANISM SECTION

CASS DECK



HEAD AZIMUTH ADJUSTING SCREW

■ Tape recorder section

Items	Measurement conditions	Measurement method	Standard Values	Adjusting positions
Confirmation of head angle	Test tape :TCC-182A(8KHz) Measurement output terminal :Speaker terminal Sparker R (Load resistance:8 Ω) :Headphone terminal	1 Playback the test tape TCC-182A (8KHz) left and right output levers become maximum, After adjustment, lock the head azimuth at least by half turn.	Maximum output	Adjust the head azimuth screw only
Confirmation of tape speed	Test tape :TCC-112(3KHz) Measurement output terminal :Headphone terminal	Adjust VR401 so that the frequency counter playing back the test tape TCC-112 (3KHz) with ending forward winding of the tape.	Tape speed of deck :3,010Hz +/-15Hz	MOTOR VR

■ Reference Values for Confirmation Items

Items	Measurement conditions	Measurement method	Standard Values	Adjusting positions
Wow & flutter	Test tape :TCC-112(3KHz) Measurement output terminal :Headphone terminal	When the test tape TCC-112 (3KHz) has been mechanism at the beginning of forward wow & flutter should be 0.25% or less (WRMS).	0.25% or less (WRMS)	

■ Electrical Performance

Items	Measurement conditions	Measurement method	Standard Values	Adjusting positions
Adjustment of recording bias current (Reference Value)	:Mode • Playback mode • Recording mode :Test tape • TDK-D60 • Measurement output terminal :Both recording and headphone terminals	1 With the recording and playback mechanism, load the test tapes TDK-D60 , and set the mechanism to the recording and pausing condition in advance. 2 After connecting 100 Ω in series to the recorder head, measure the bias current with a valve voltmeter at both of the terminals.	TDK-D60 4.5 μA +/-0.5 μA	
Adjustment of recording and playback frequency characteristics	:Reference frequency • 1KHz and 8KHz (REF.:- 10dB) :Test tape • TDK-D60 • Measurement output terminal :OSC IN	1 With the recording and playback mechanism, load the test tapes (TDK-D60) and set the mechanism to the recording and pausing condition in advance. 2 While repetitively inputting the reference frequency signal of 1KHz and 8KHz from OSC IN, record and playback the tape. 3 While receding and playback the test tape Lch and Rch so that the output deviation between 1KHz and 8KHz becomes -1dB +/-2dB.	Output deviation between 1KHz and 8KHz :-1dB +/-2dB	

■ Reference Values for Electrical Function Confirmation Items

Items	Measurement conditions	Measurement method	Standard Values	Adjusting positions
Recording bias frequency	Playback :Test tape • TDK-D60 • Measurement terminal : BIAS TP on P.C. board	1 While changing over to and form BIAS 1 and 2, confirm that the frequency is changed. 2 With the recording and playback mechanism, load the test tape (TDK-D60) , and set the mechanism to the recording and pausing condition in advance. 3 Confirm that the BIAS TP frequency on the P.C. board is 62KHz +/-6KHz.	62KHz +/-6KHz	T201

CHAPTER 3. MECHANISM BLOCKS

[1] Caution on disassembly

Caution on Disassembly
Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep it safe and ensure excellent
performance:
1. Take cassette tape and compact disc out of the unit.
2. Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need to be removed when disassembling the unit.
   After servicing the unit, be sure to rearrange the leads where they were before disassembling.

STEP	REMOVAL	PROCEDURE	FIGURE
1	Rear Cabinet	1. Screw..... (A1) X 6 2. Screw..... (A2) X 4 3. Socket..... (A3) X 1	1 1 7
2	Top Cabinet	1. Screw..... (B1) X 2 2. Socket.....(B2) X 3 3. Flat Cable.....(B3) X 1	2
3	AUDIO PWB	1. Screw..... (C1) X 2 2. Socket..... (C2) X 3	3
4	MCU PWB	1. Socket..... (D1) X 1	3
5	CD PWB	1. Screw..... (E1) X 4	4
6	CONTROL PWB	1. Screw..... (F1) X 8	5
7	TUNER PWB	1. Screw..... (G1) X 2	6
8	RECTIFIER PWB	1. Screw.....(H1) X 2 2. Socket.....(H2) X 3	7

CHAPTER 4. BLOCK DIAGRAM

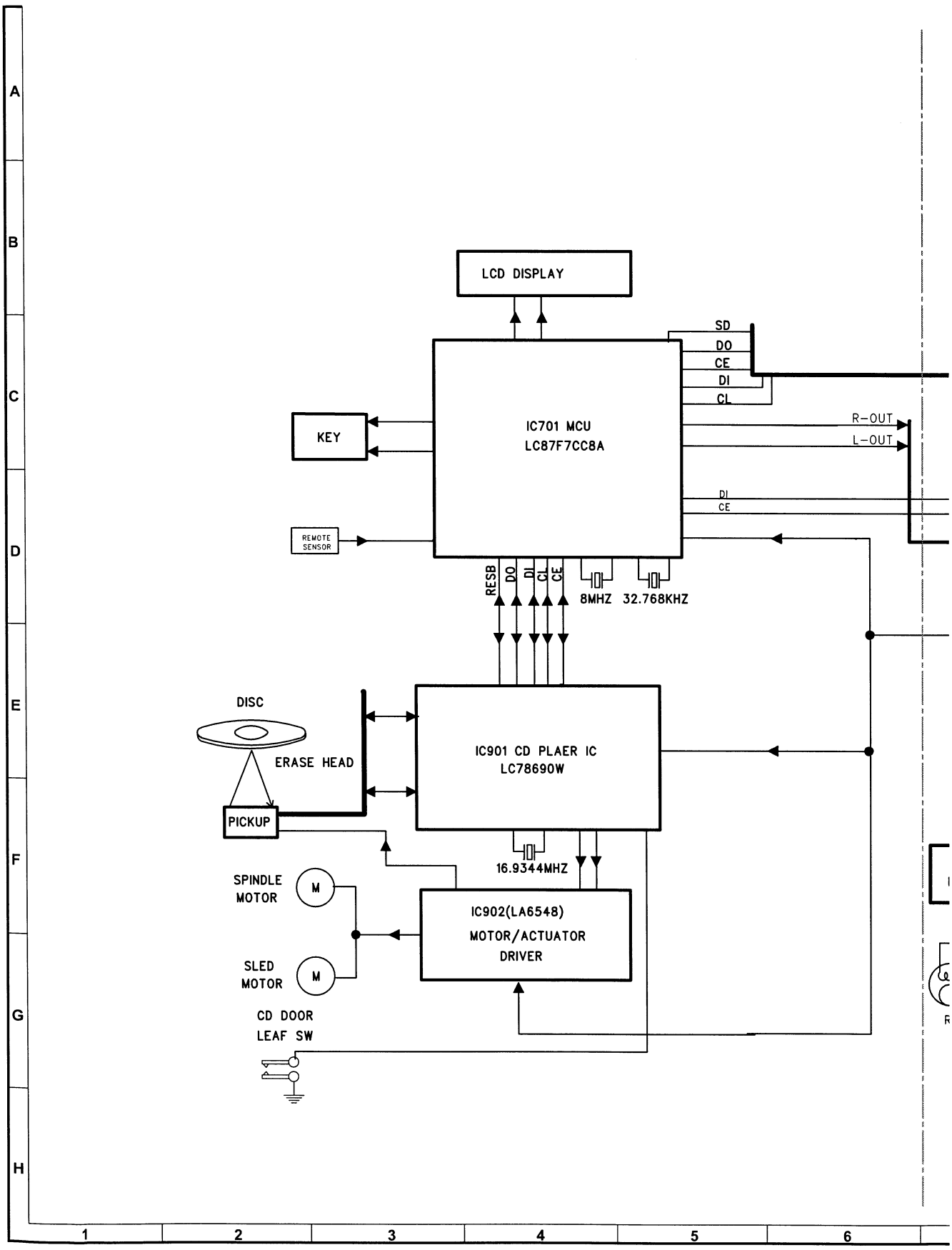
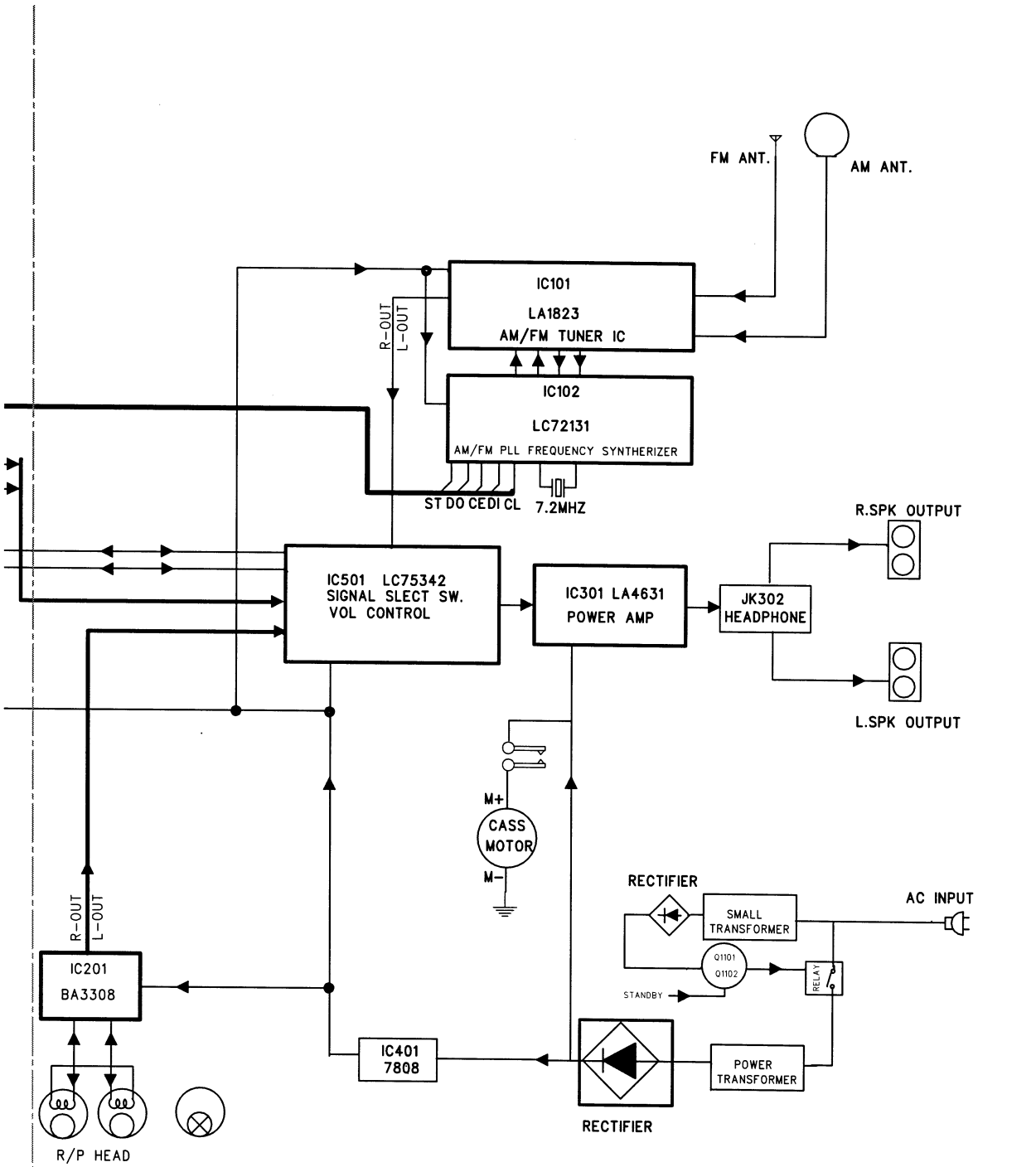


Figure 1: BLOCK DIAGRAM (1/2)

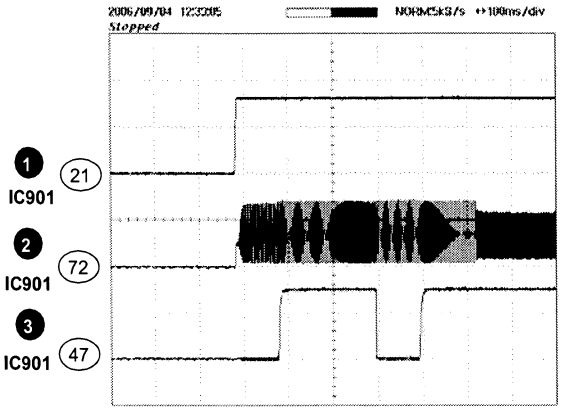


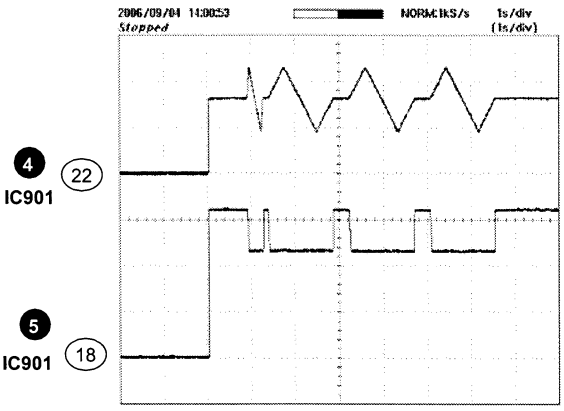
7	8	9	10	11	12

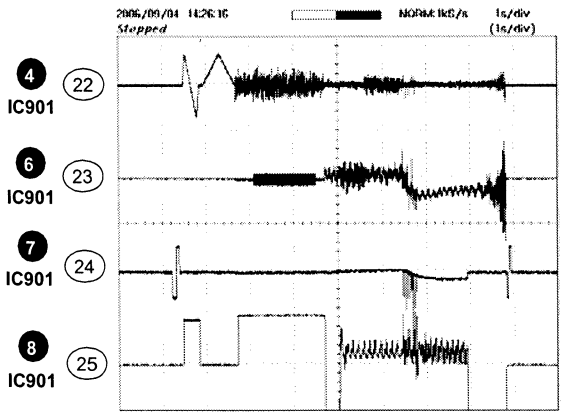
Figure 2: BLOCK DIAGRAM (2/2)

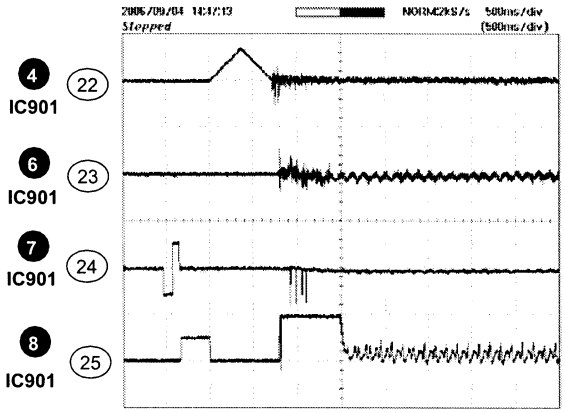
CHAPTER 5. CIRCUIT DESCRIPTION

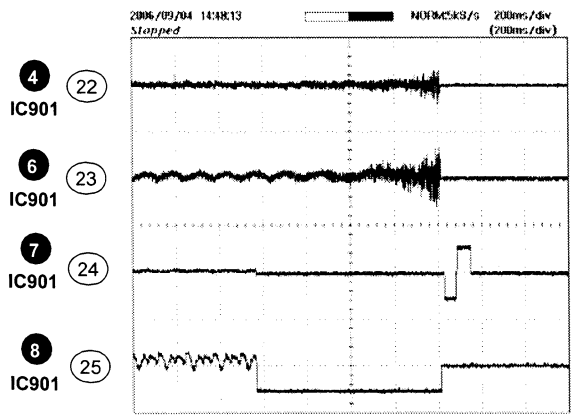
[1] Waveform Of Servo Circuit

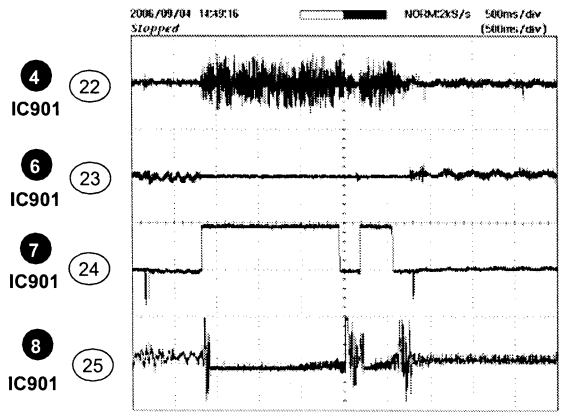


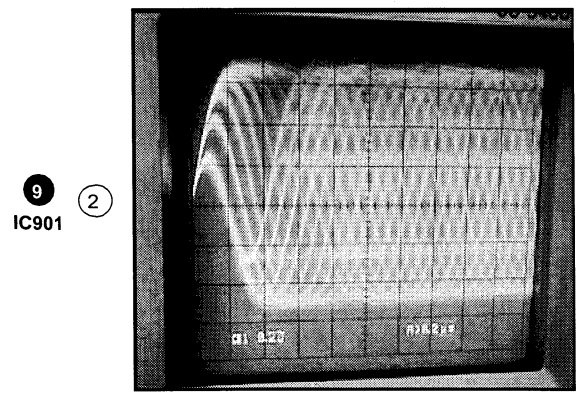












[2] IC Voltage

IC901
LC78690W

PIN NO	VOLTAGE	PIN NO	VOLTAGE	PIN NO	VOLTAGE
1	1.63	33	3.10	65	0.00
2	1.64	34	0.01	66	1.82
3	1.63	35	1.60	67	0.00
4	1.66	36	3.10	68	3.15
5	1.67	37	0.00	69	0.00
6	1.67	38	1.80	70	0.00
7	1.67	39	3.15	71	0.00
8	1.67	40	0.00	72	1.30
9	1.67	41	3.15	73	1.32
10	1.67	42	0.01	74	3.00
11	1.67	43	0.13	75	1.47
12	0.01	44	3.00	76	2.90
13	1.67	45	4.50	77	0.00
14	1.66	46	3.10	78	1.40
15	1.67	47	2.20	79	3.30
16	1.66	48	3.10	80	1.63
17	1.66	49	3.15		
18	3.30	50	0.00		
19	0.01	51	0.00		
20	0.01	52	0.00		
21	3.30	53	0.00		
22	1.67	54	0.00		
23	1.66	55	0.00		
24	1.67	56	0.00		
25	1.66	57	0.00		
26	0.01	58	0.00		
27	0.01	59	0.00		
28	1.54	60	0.00		
29	1.10	61	3.00		
30	3.30	62	1.56		
31	0.01	63	1.91		
32	0.01	64	1.91		

IC401
KIA7808

PIN NO	VOLTAGE
1	14.40
2	0.00
3	7.90

IC701
LC87F7CC8A

PIN NO	VOLTAGE	PIN NO	VOLTAGE	PIN NO	VOLTAGE
1	0.00	33	2.40	65	4.60
2	0.00	34	2.40	66	0.00
3	0.00	35	2.40	67	4.80
4	0.00	36	2.40	68	0.00
5	4.80	37	2.40	69	0.00
6	2.10	38	2.40	70	1.60
7	2.40	39	4.80	71	0.00
8	0.00	40	0.00	72	0.00
9	2.20	41	2.40	73	0.00
10	2.30	42	2.40	74	3.10
11	4.80	43	2.40	75	0.00
12	1.20	44	2.40	76	0.00
13	0.00	45	2.40	77	4.80
14	4.80	46	2.40	78	3.20
15	3.20	47	2.40	79	4.70
16	4.80	48	2.40	80	0.00
17	4.80	49	2.40		
18	0.00	50	2.40		
19	4.40	51	2.40		
20	2.00	52	2.40		
21	4.80	53	2.40		
22	0.00	54	2.40		
23	4.80	55	2.40		
24	2.40	56	2.40		
25	2.40	57	2.40		
26	2.40	58	4.80		
27	2.40	59	4.80		
28	2.40	60	0.10		
29	2.40	61	2.40		
30	2.40	62	2.40		
31	2.40	63	2.40		
32	2.40	64	2.40		

IC902
LA6548

PIN NO	VOLTAGE	PIN NO	VOLTAGE
1	7.10	15	3.31
2	0.00	16	3.90
3	1.65	17	1.65
4	1.65	18	1.65
5	3.20	19	3.21
6	3.20	20	3.20
7	0.00	21	0.00
8	0.00	22	0.00
9	3.21	23	3.20
10	3.21	24	3.20
11	1.65	25	1.65
12	1.65	26	1.65
13	3.30	27	1.66
14	6.40	28	7.10

IC301
LA4631

PIN NO	VOLTAGE
1	7.92
2	1.52
3	0.00
4	1.52
5	2.91
6	10.80
7	15.80
8	7.96
9	0.00
10	0.00
11	0.00
12	7.90
13	0.00

IC501
LC75342

PIN NO	VOLTAGE	PIN NO	VOLTAGE
1	0.16	16	0.00
2	0.16	17	3.16
3	0.00	18	3.16
4	0.00	19	3.16
5	3.17	20	3.16
6	3.17	21	3.10
7	3.15	22	3.16
8	3.16	23	3.16
9	3.16	24	3.15
10	3.17	25	3.17
11	3.16	26	3.17
12	3.16	27	0.00
13	3.16	28	3.17
14	3.16	29	6.37
15	0.00	30	0.15

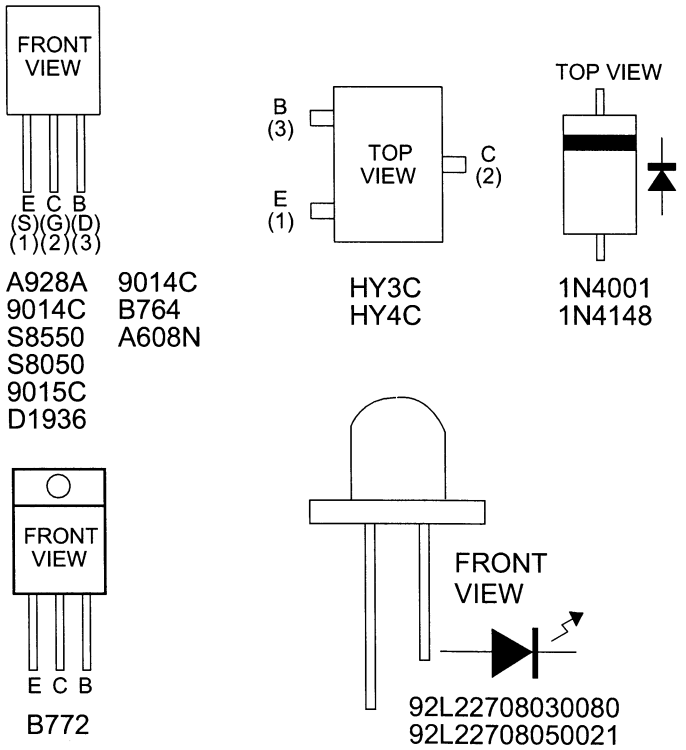
CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT

[1] Notes On Schematic Diagram

- Resistor:
  To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with "Fusible" is a fuse type.
- Capacitor:
  To indicate the unit of capacitor, a symbol P is used: this symbol P means pico-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression "capacitance/withstand voltage" is used.
  (CH), (TH), (RH), (UJ): Temperature compensation
  (ML): Mylar type
  (P.P.): Polypropylene type
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.
  1. In the tuner section,
     indicates AM
     indicates FM stereo
  2. In the audio section, a tape is being played back.
  3. In the deck section, a tape is being played back.
     ( ) indicates the record state.
  4. In the rectifier section, a tape is being played back.
  5. In the CD section, the CD is stopped.
- Parts marked with "⚠" (⊏二二二⊐) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF. NO	DESCRIPTION	POSITION
SW701	Power On / Stand-by	ON—OFF
SW702	Sleep	ON—OFF
SW703	Clock / Timer	ON—OFF
SW704	Memory / Display	ON—OFF
SW705	Tuning Up / Folder Up	ON—OFF
SW706	Tuning Down / Folder Down	ON—OFF
SW707	Stop	ON—OFF
SW708	Disc Track Up / Fast Forward / Tuner Preset Up / Time Up	ON—OFF
SW709	Disc Track Down / Fast Reverse / Tuner Preset Down / Time Down	ON—OFF
SW710	Extra Bass	ON—OFF
SW711	Equaliser	ON—OFF
SW712	Tape	ON—OFF
SW713	Tuner (Band)	ON—OFF
SW714	CD Play / Pause	ON—OFF
VR701	Volume	MAX—MIN

[2] Types Of Transistor And LED



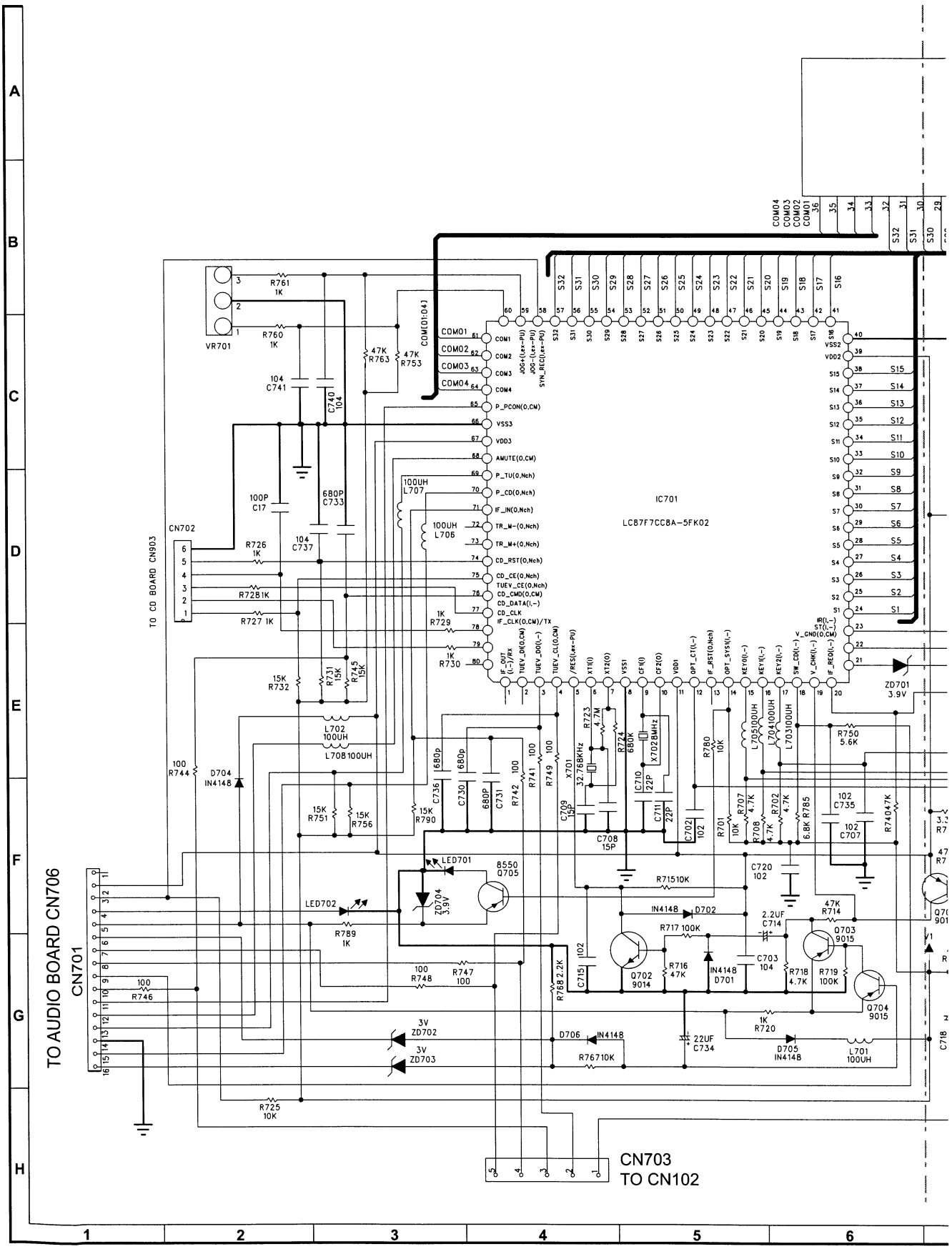
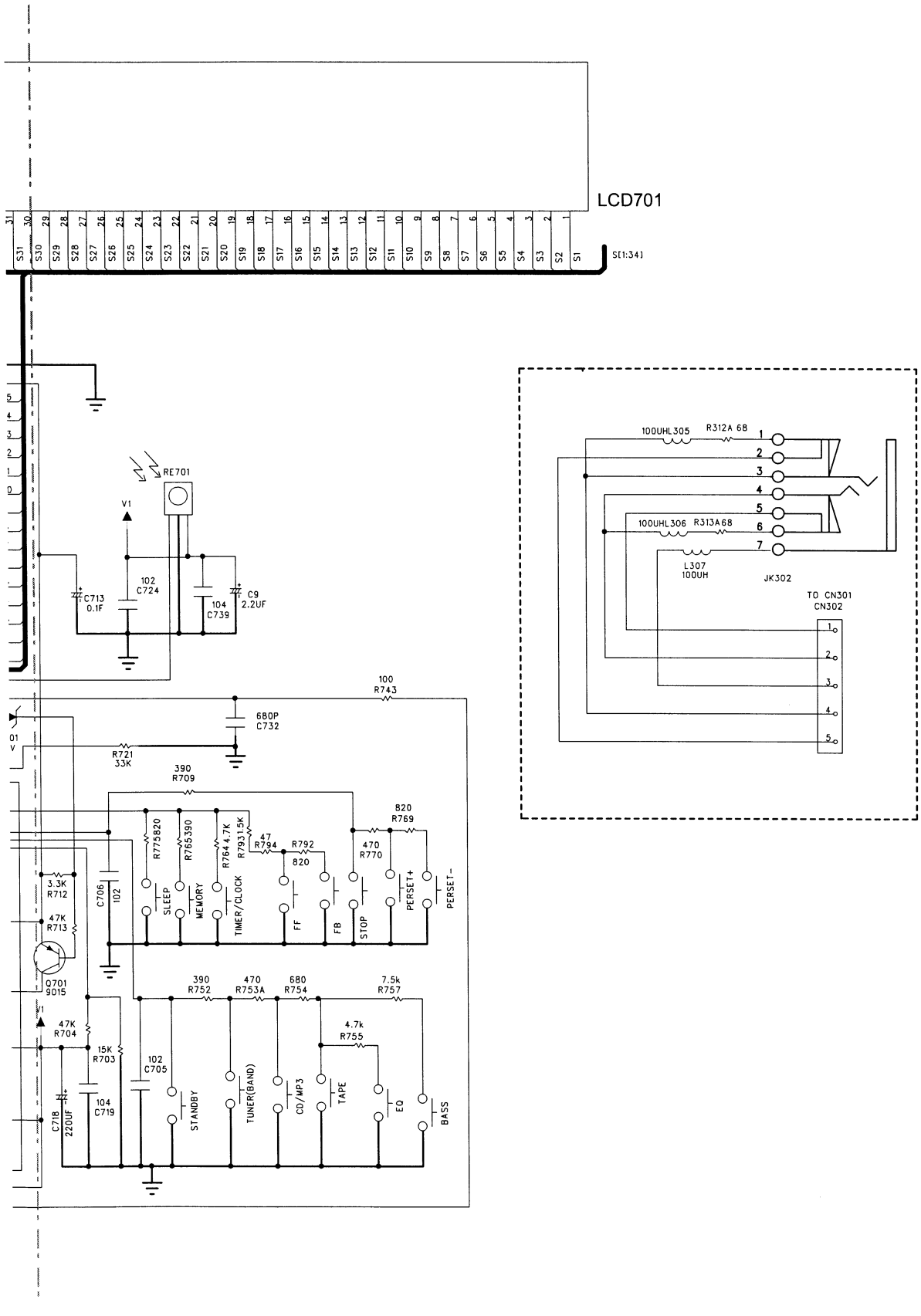


Figure 6-1: MCU SCHEMATIC DIAGRAM (1/2)



7	8	9	10	11	12

Figure 6-2: MCU SCHEMATIC DIAGRAM (2/2)

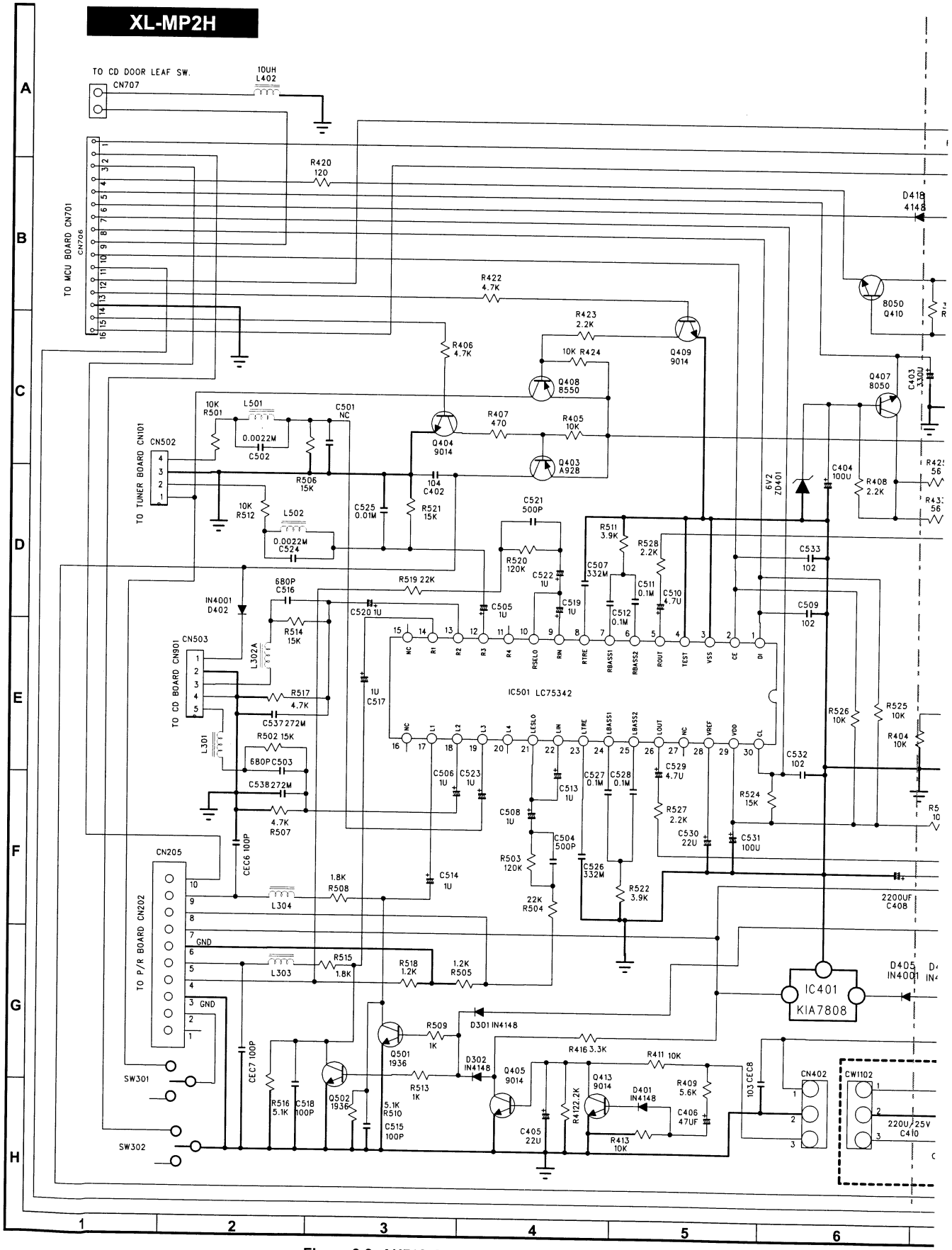


Figure 6-3: AUDIO SCHEMATIC DIAGRAM (1/2)

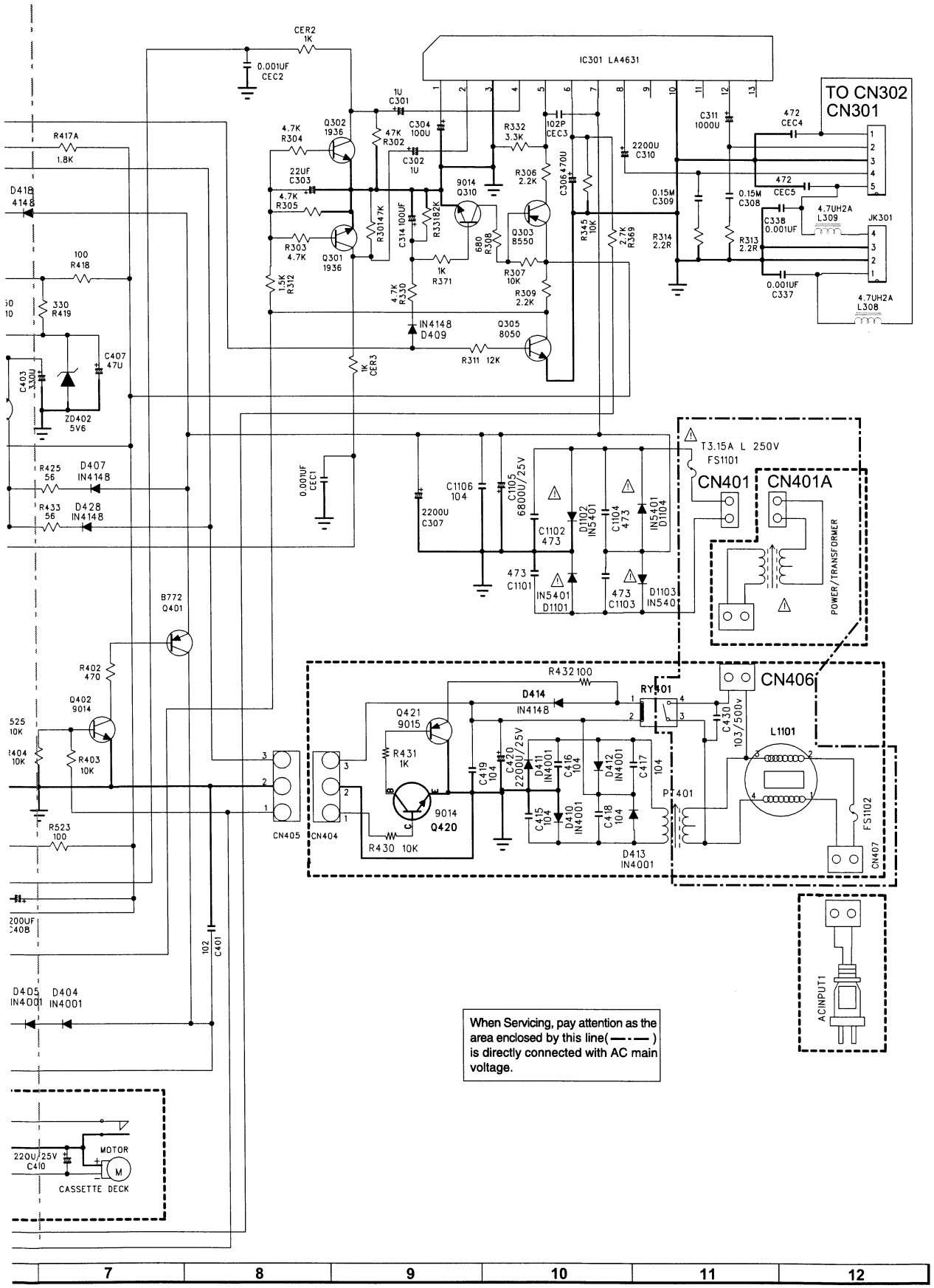


Figure 6-4: AUDIO SCHEMATIC DIAGRAM (2/2)

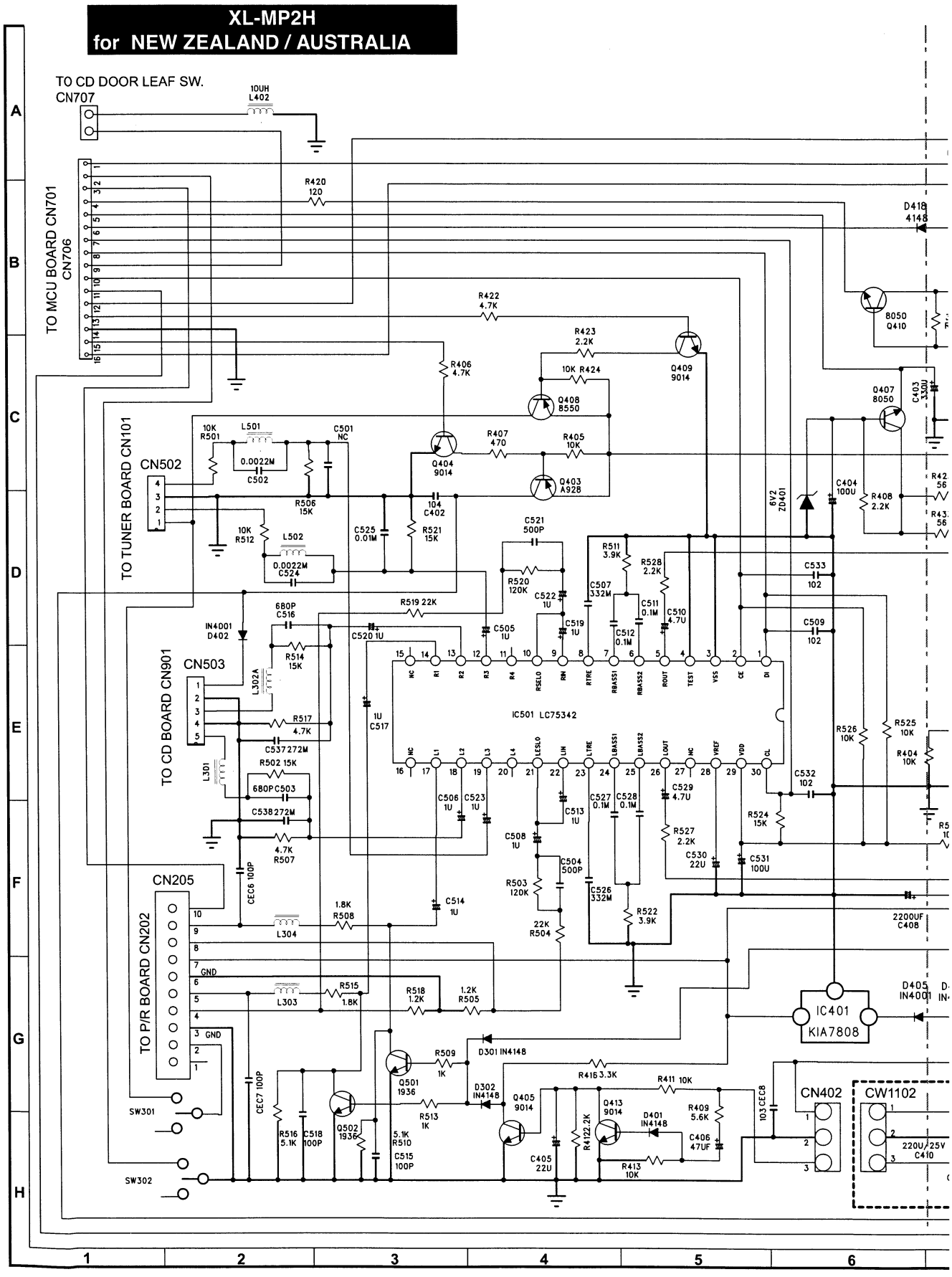


Figure 6-5: AUDIO SCHEMATIC DIAGRAM (1/2)

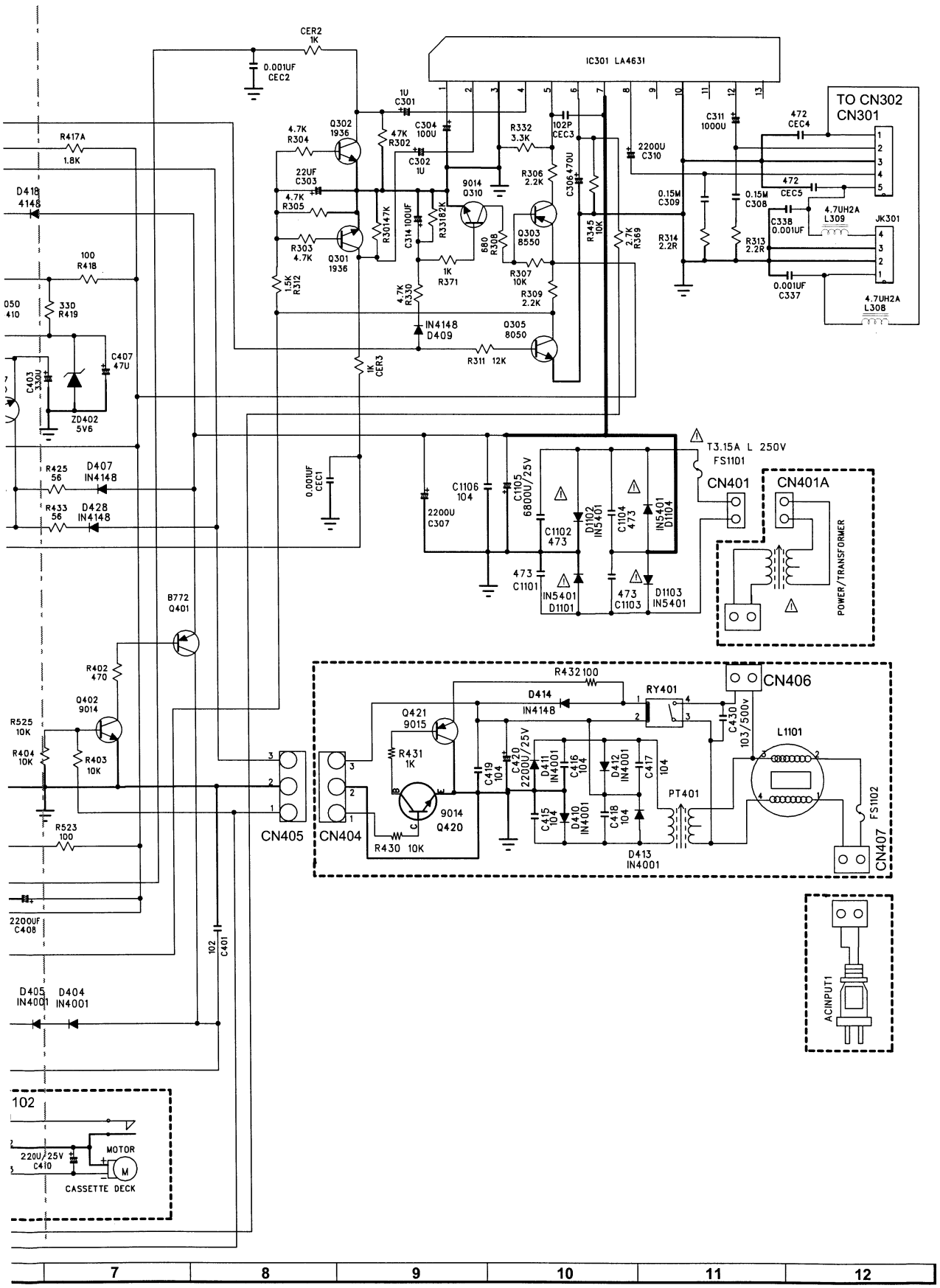


Figure 6-6: AUDIO SCHEMATIC DIAGRAM (2/2)

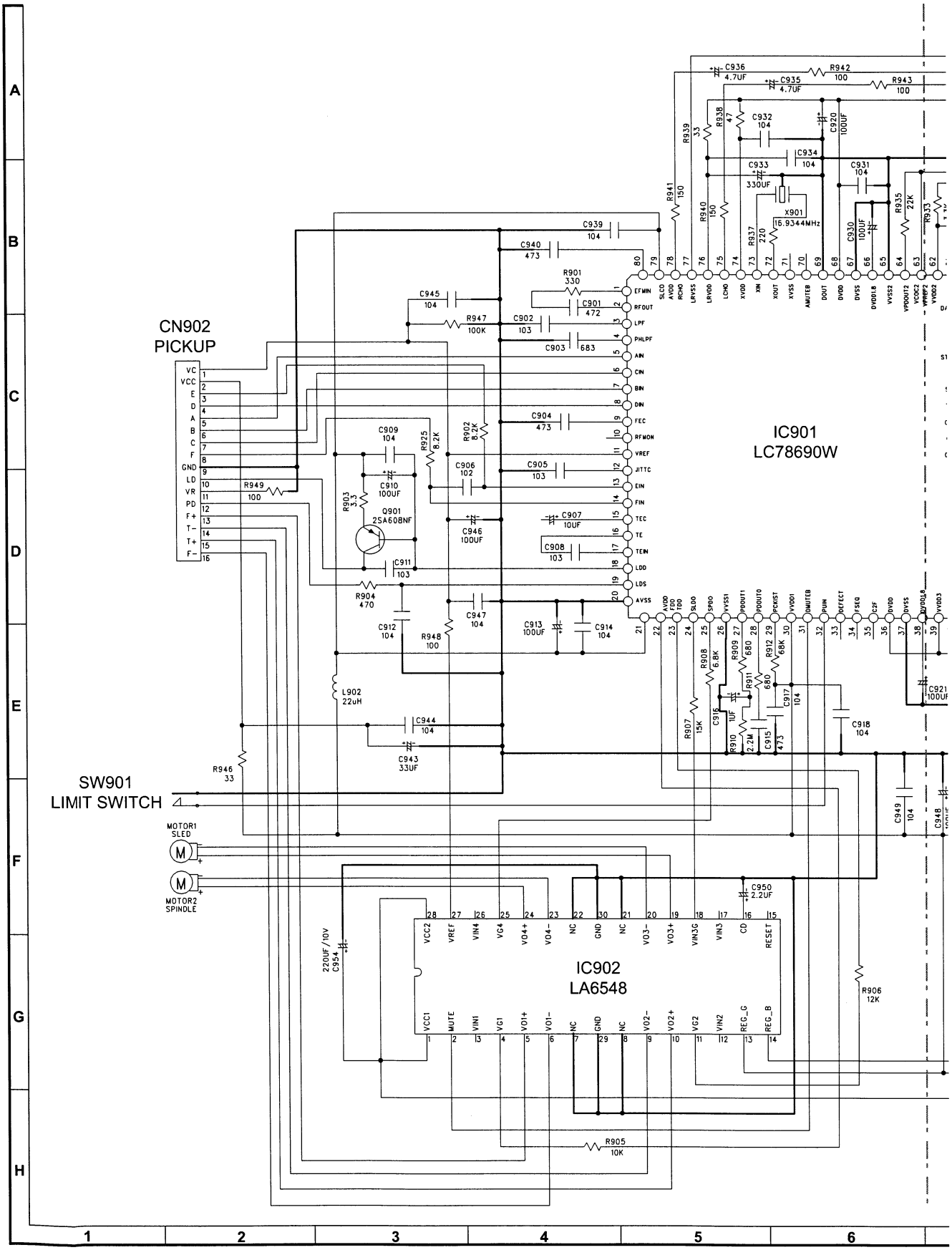
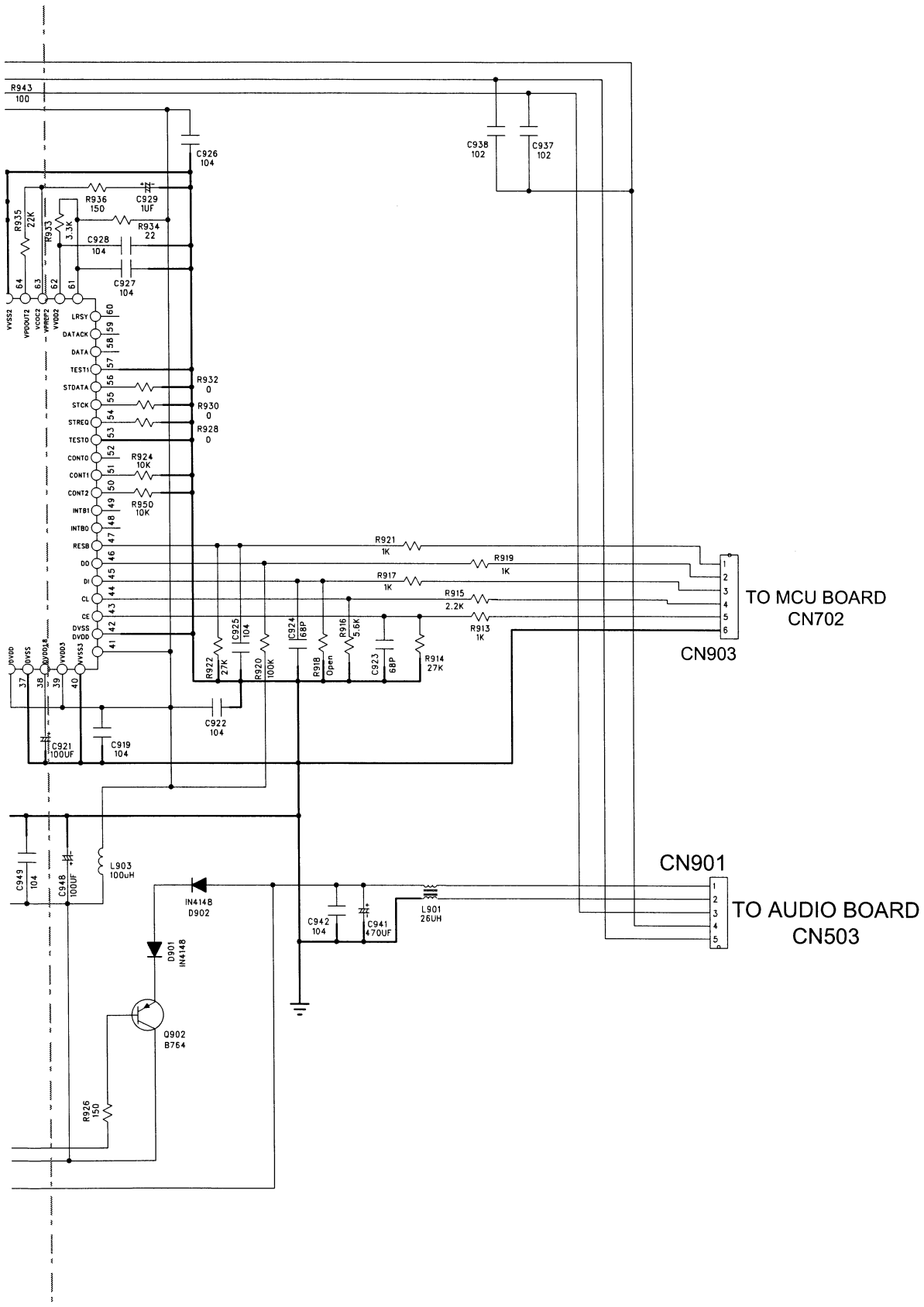


Figure 6-7: CD SCHEMATIC DIAGRAM (1/2)



7	8	9	10	11	12

Figure 6-8: CD SCHEMATIC DIAGRAM (2/2)

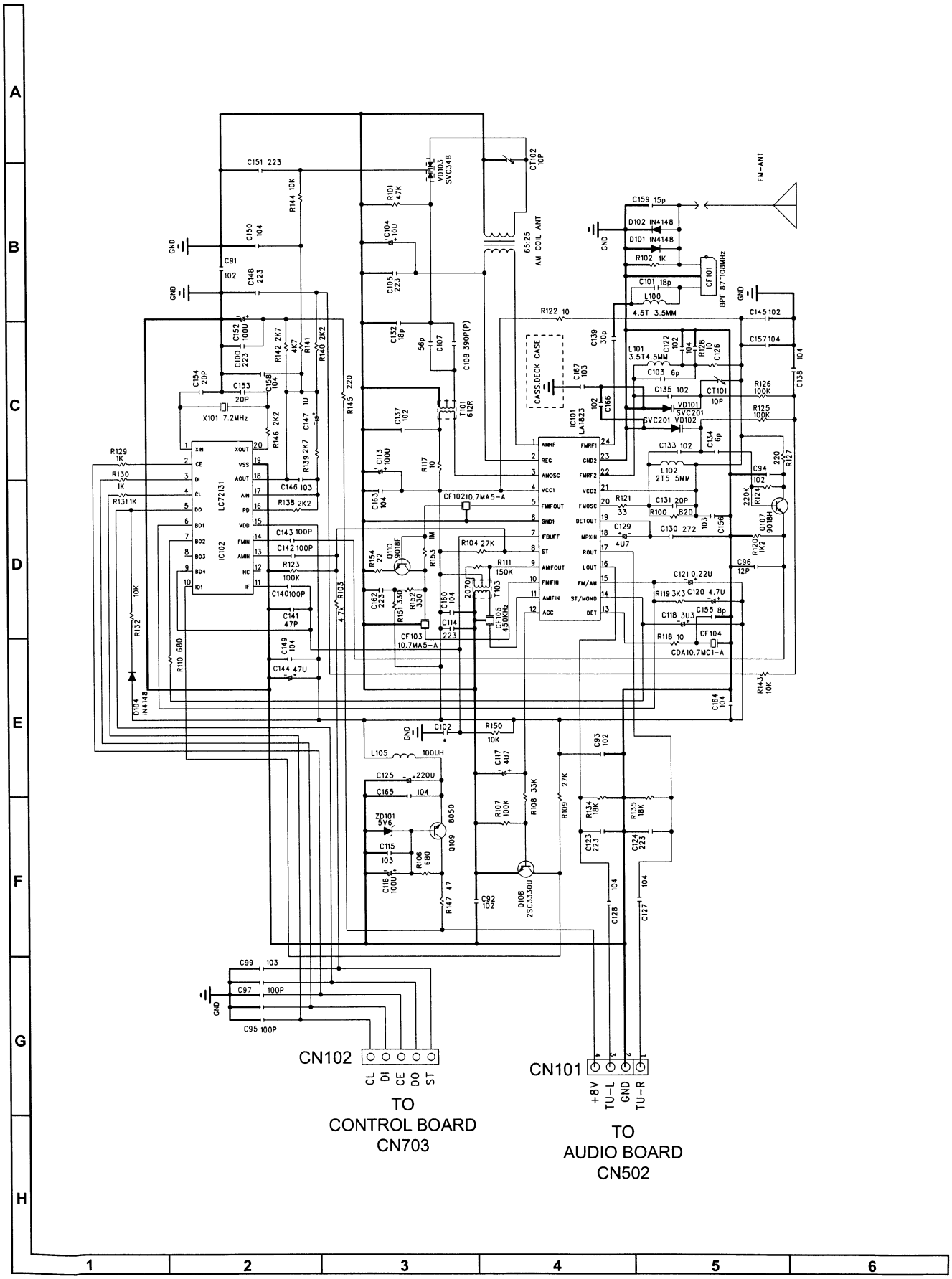


Figure 6-9: TUNER SCHEMATIC DIAGRAM

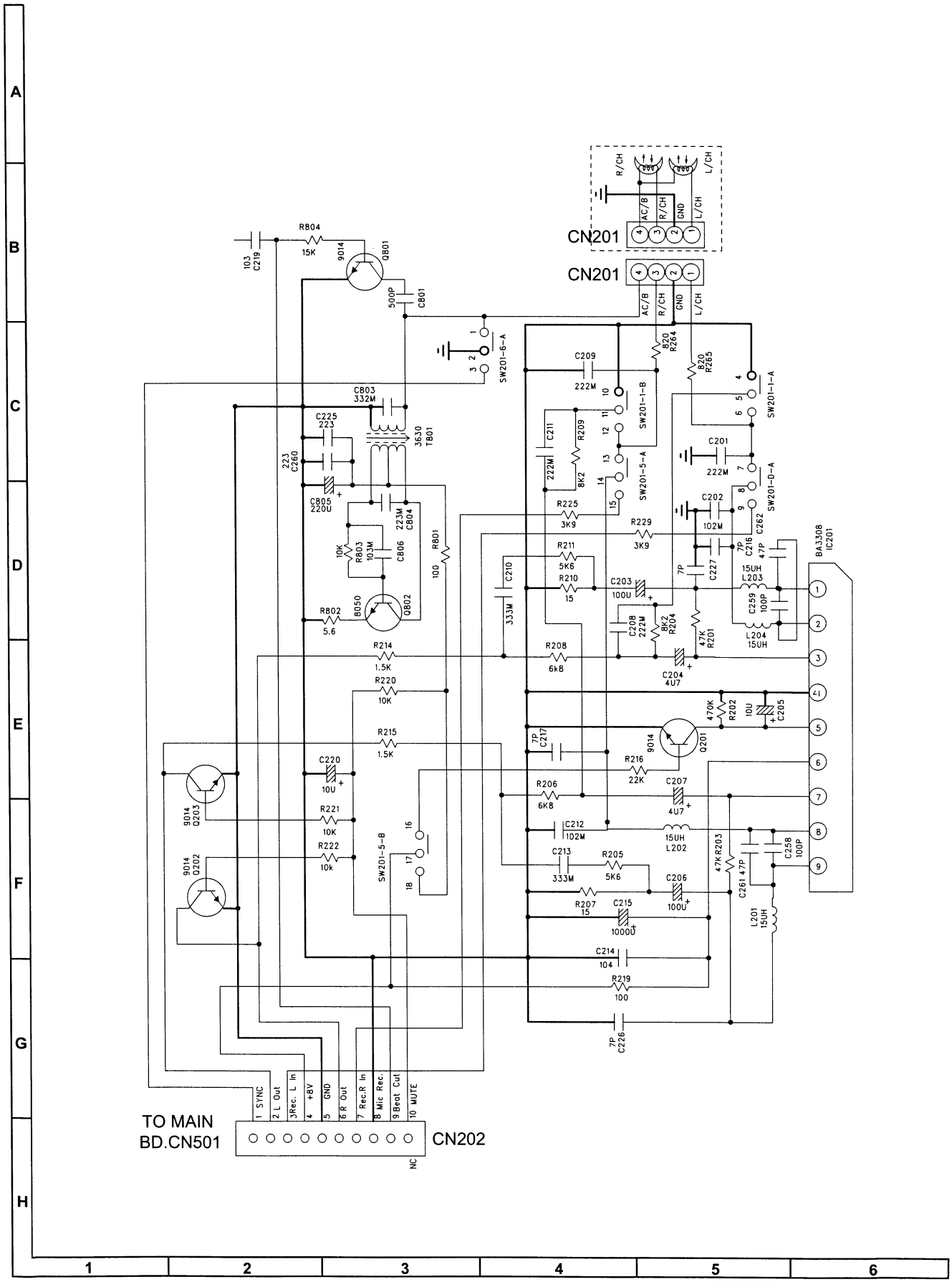


Figure 6-10: TAPE SCHEMATIC DIAGRAM

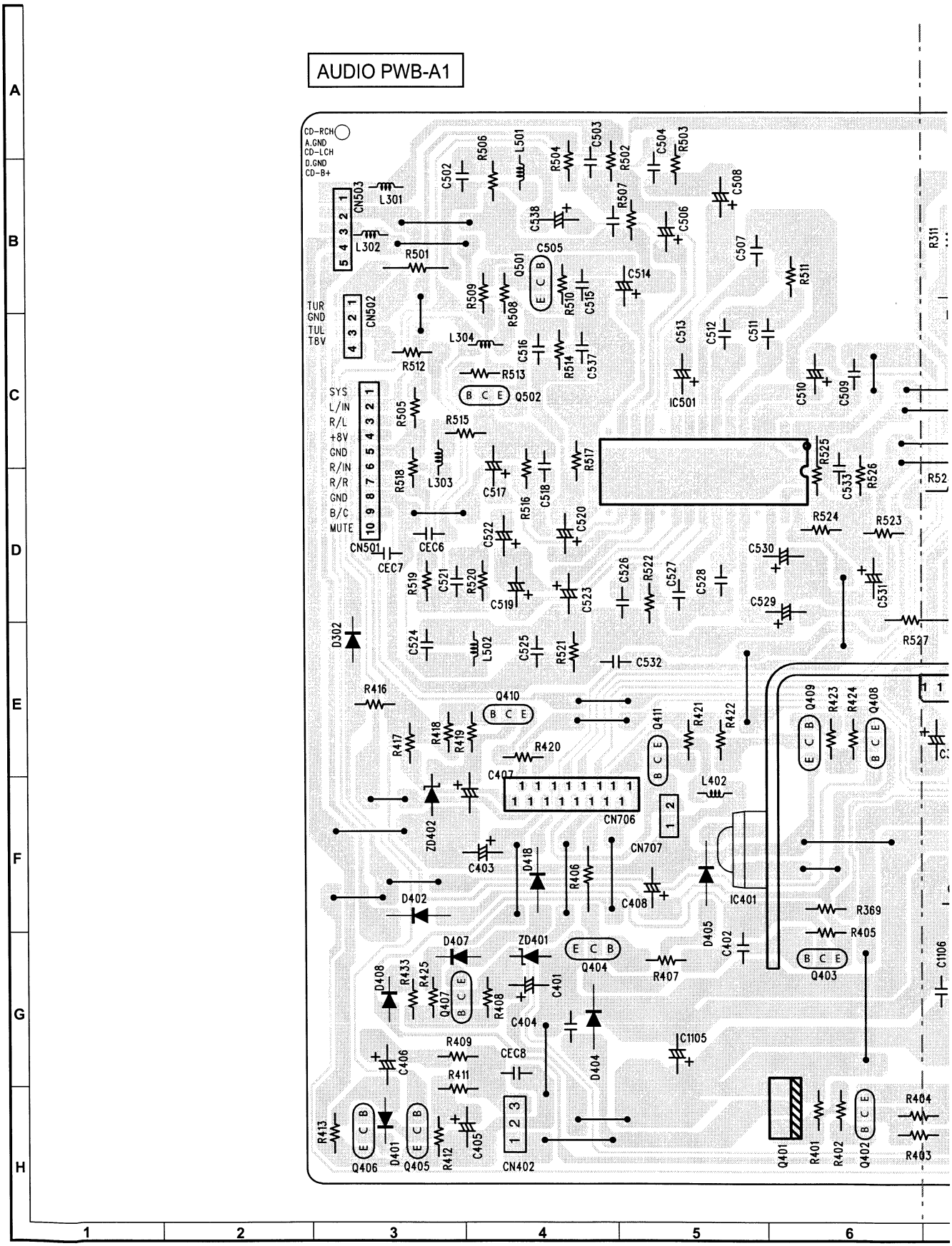


Figure 6-9: WIRING SIDE OF AUDIO PWB (TOP VIEW)

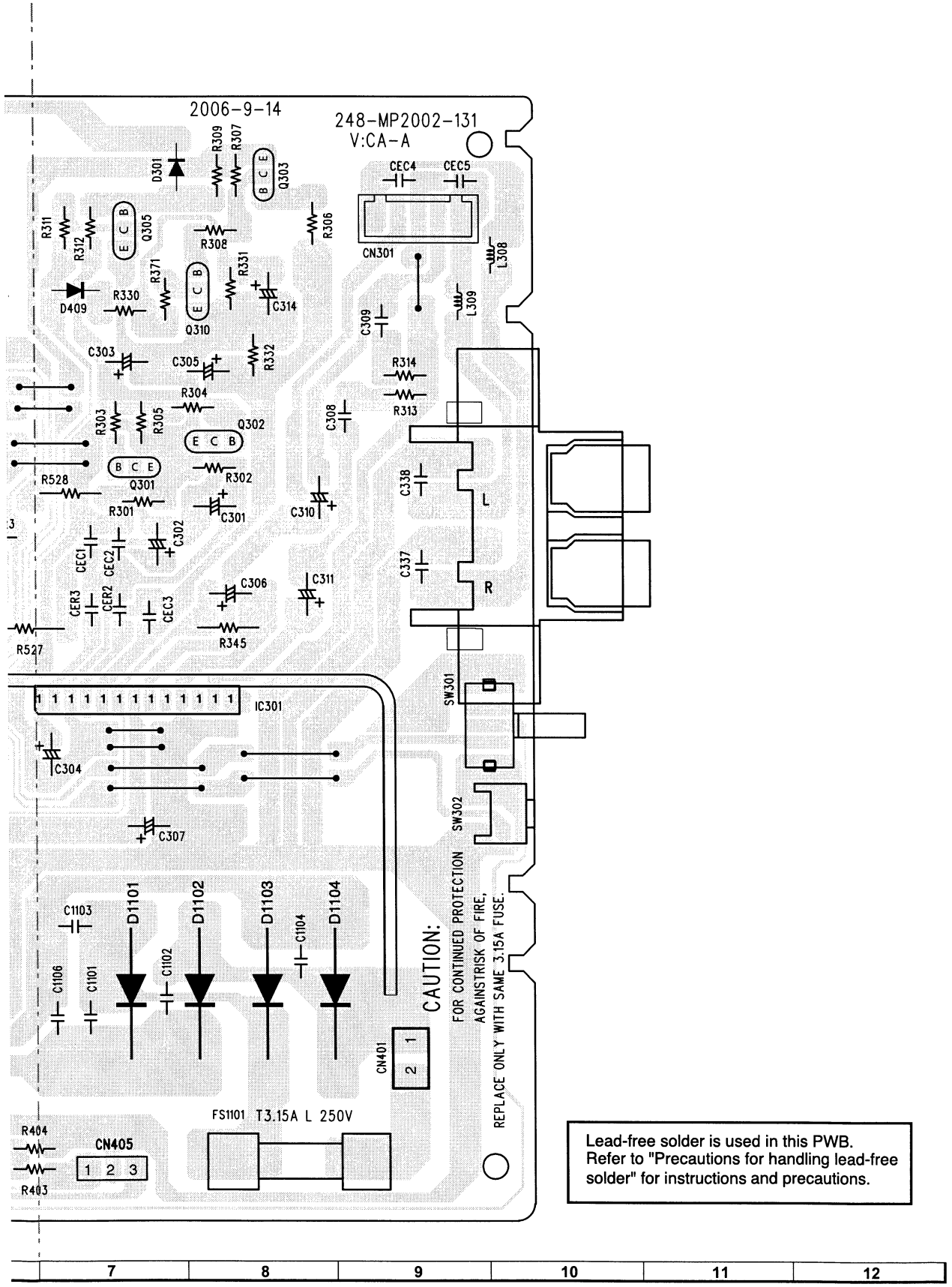


Figure 6-10: WIRING SIDE OF AUDIO PWB (TOP VIEW)

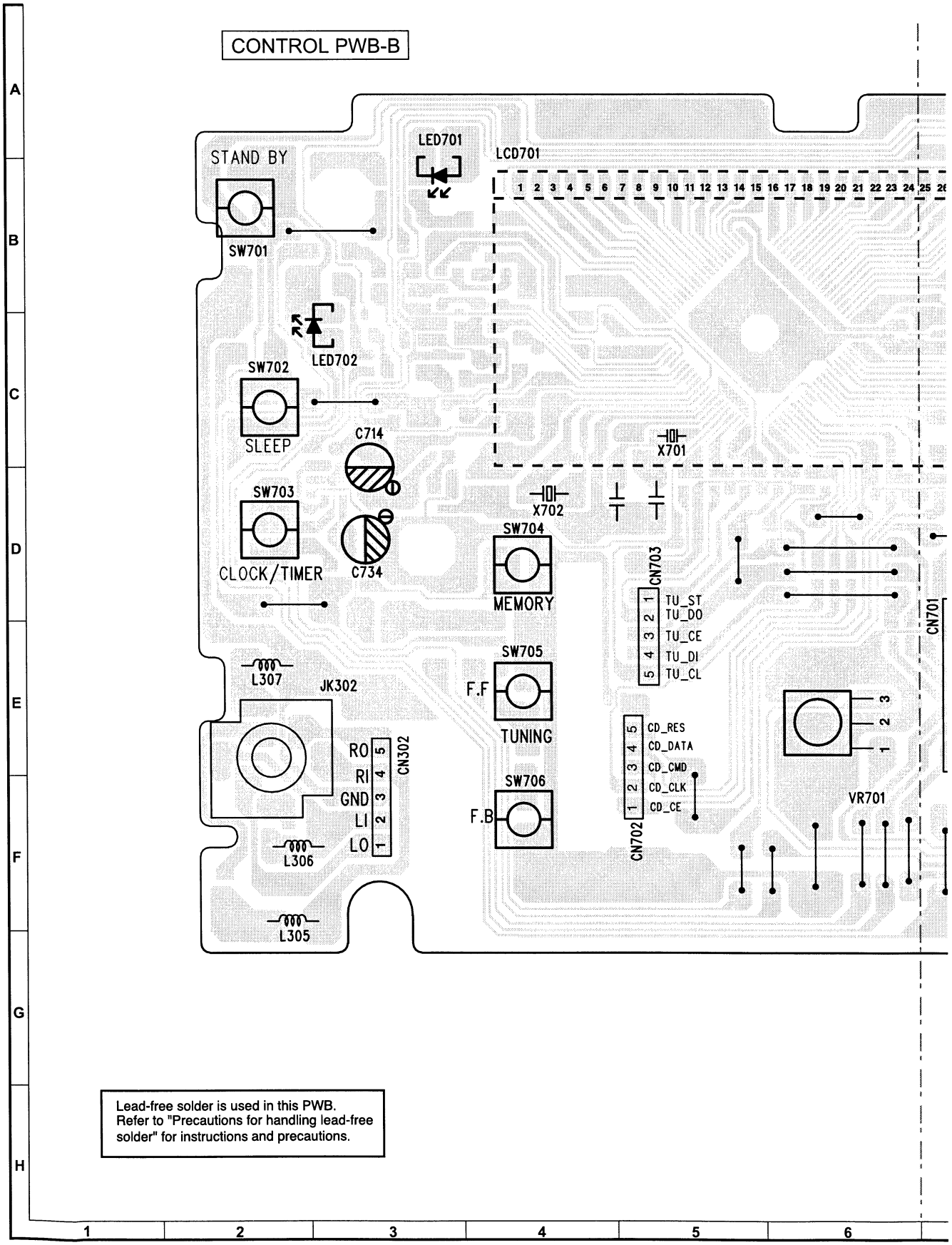
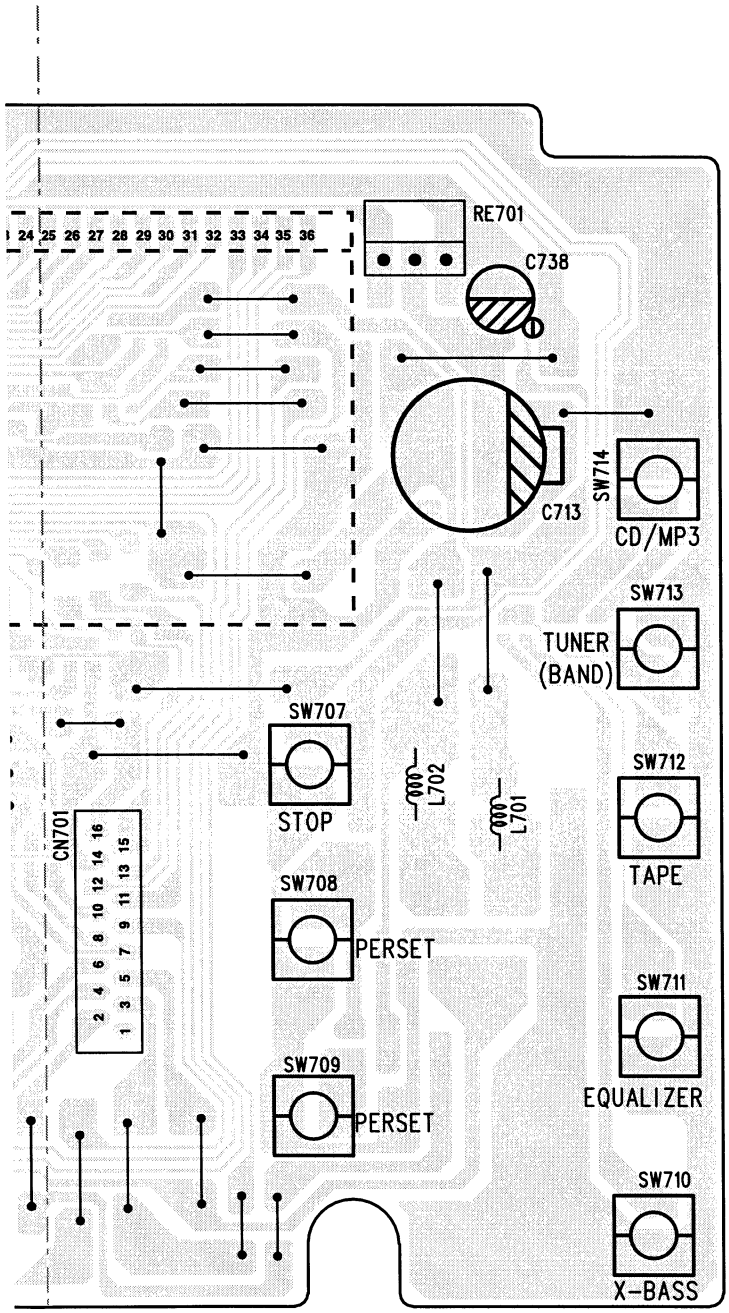


Figure 6-11: WIRING SIDE OF CONTROL PWB (TOP VIEW)



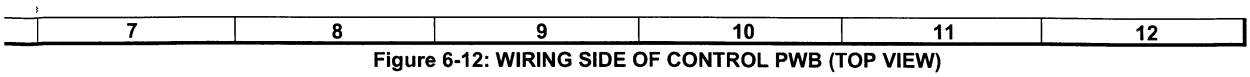


Figure 6-12: WIRING SIDE OF CONTROL PWB (TOP VIEW)

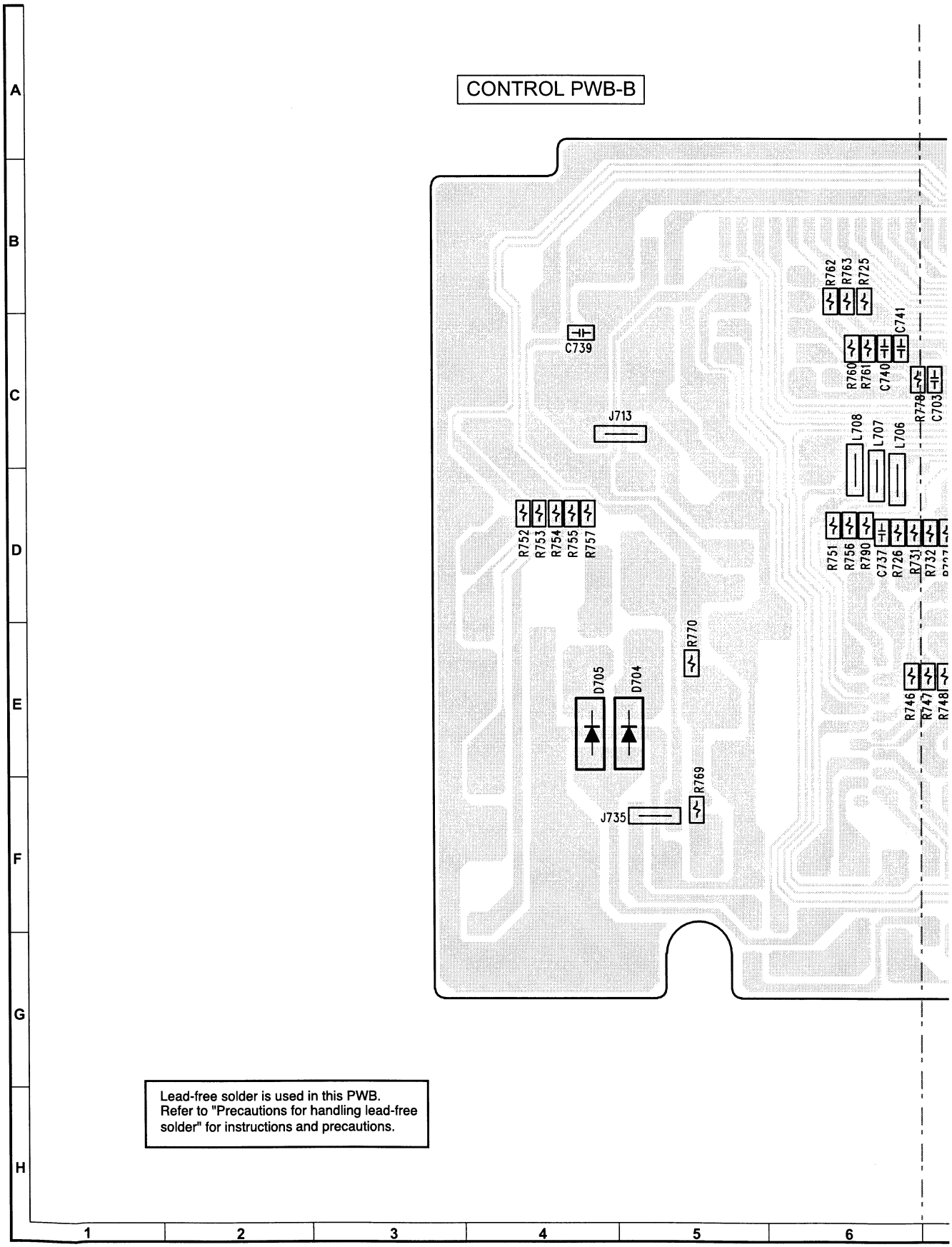
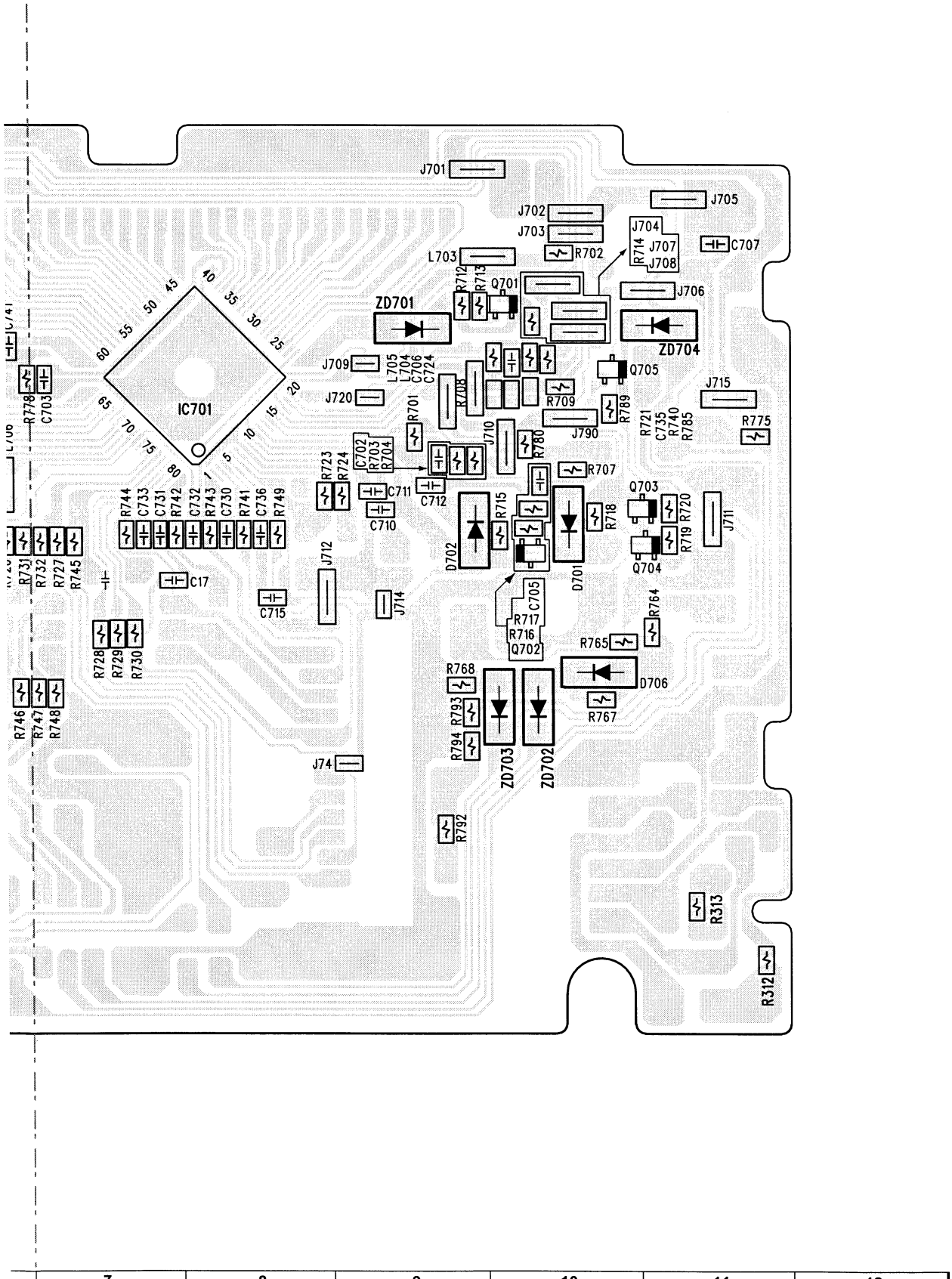


Figure 6-13: WIRING SIDE OF CONTROL PWB (BOTTOM VIEW)



7	8	9	10	11	12

Figure 6-14: WIRING SIDE OF CONTROL PWB (BOTTOM VIEW)

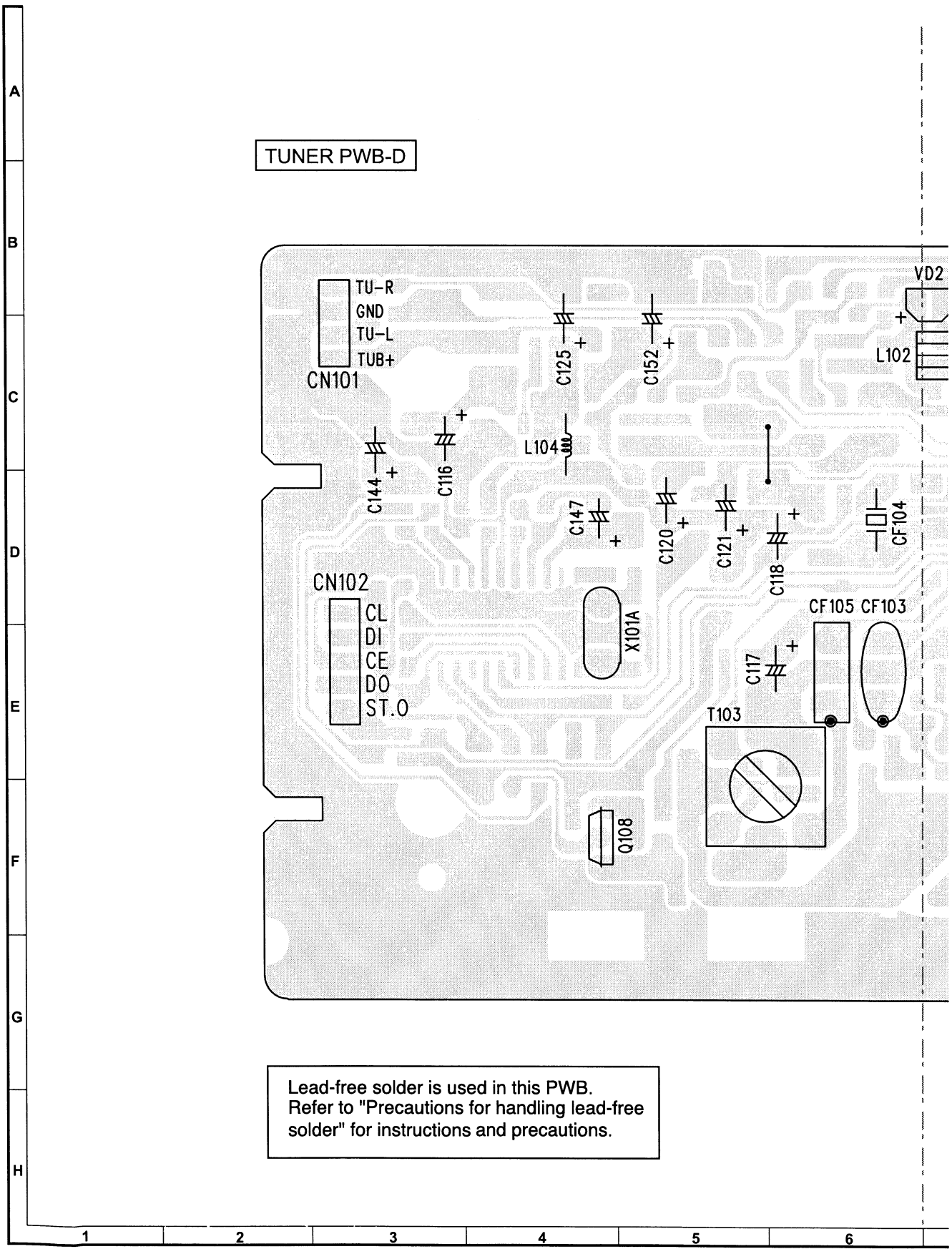


Figure 6-15: WIRING SIDE OF TUNER PWB (TOP VIEW)

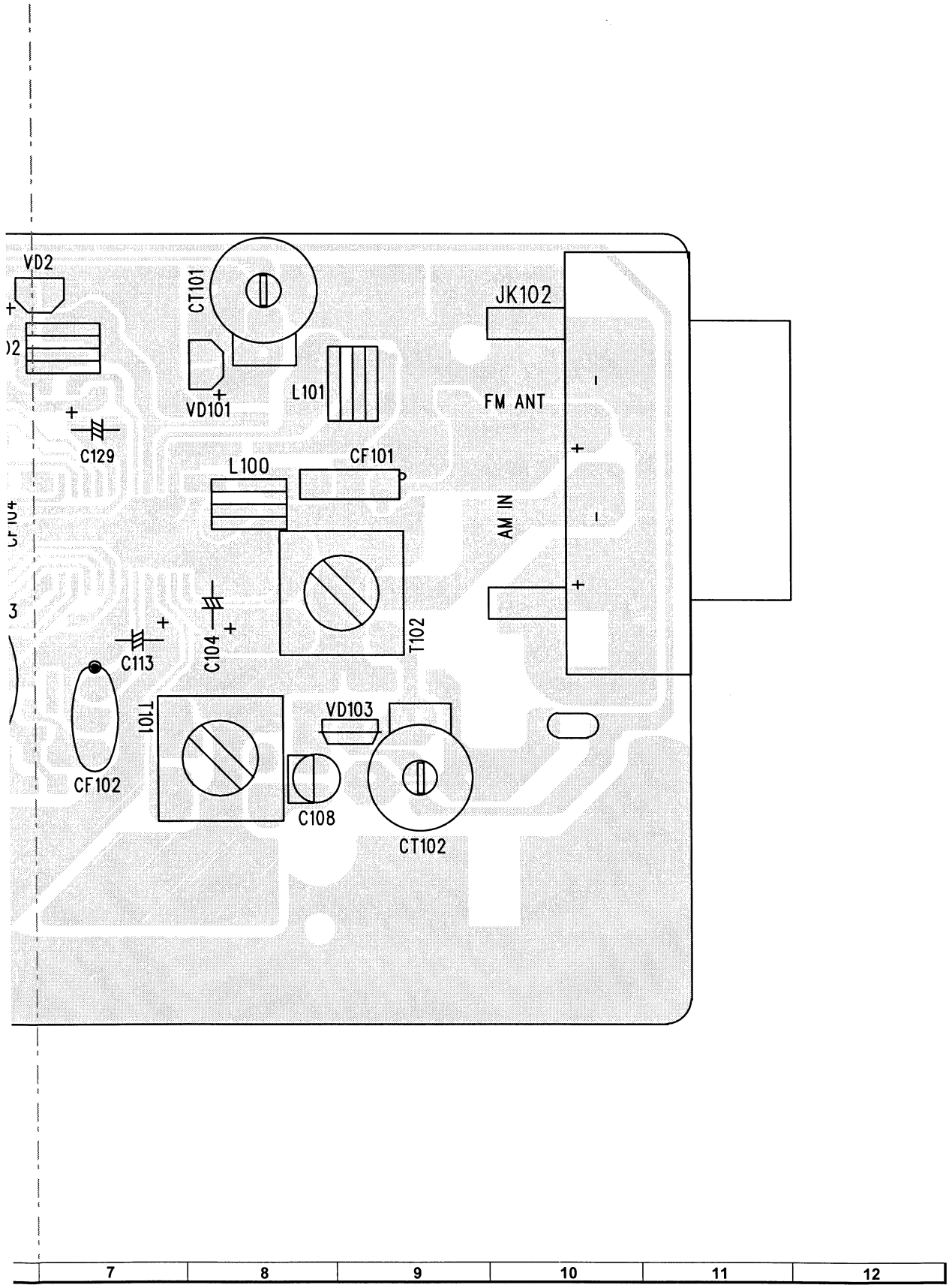
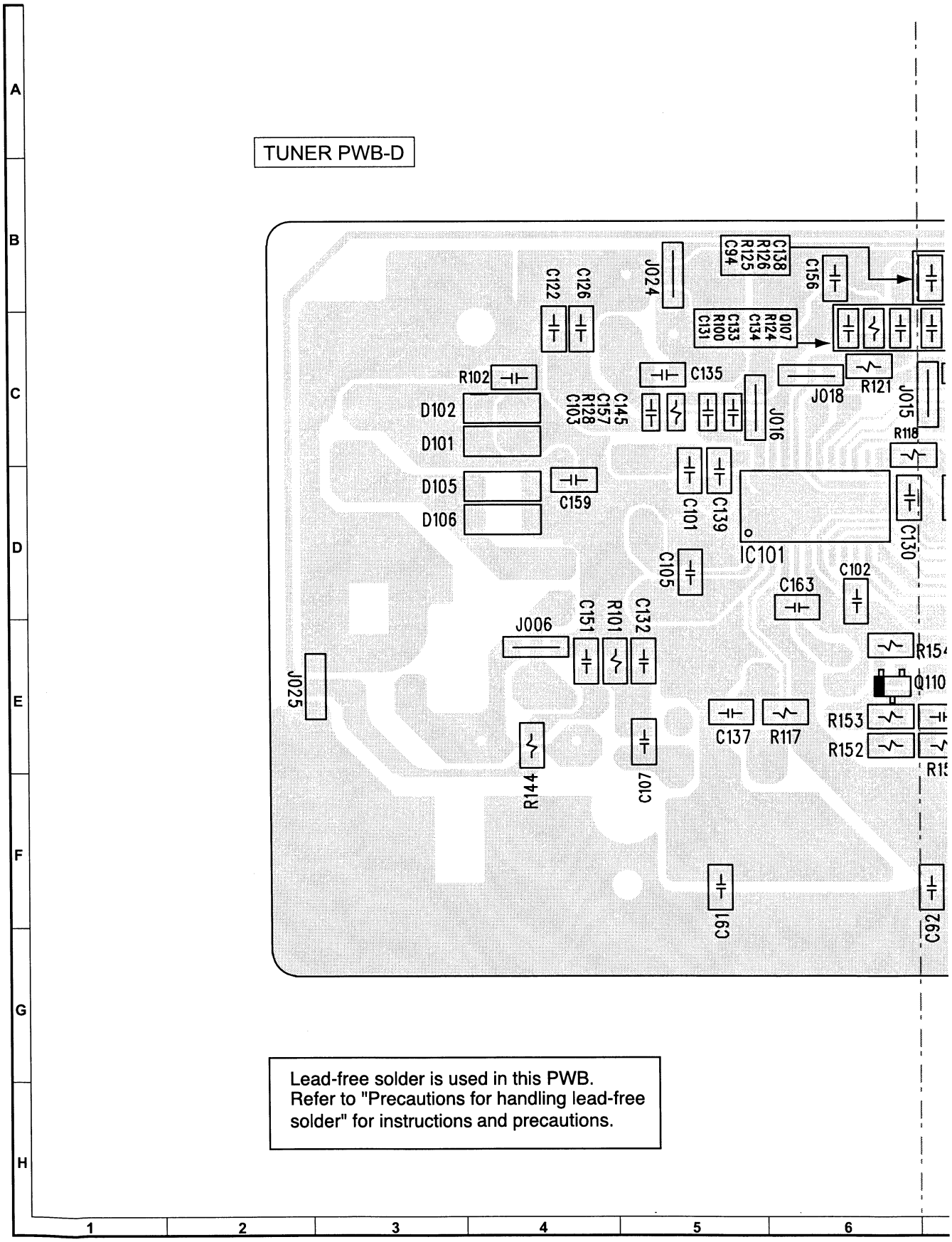
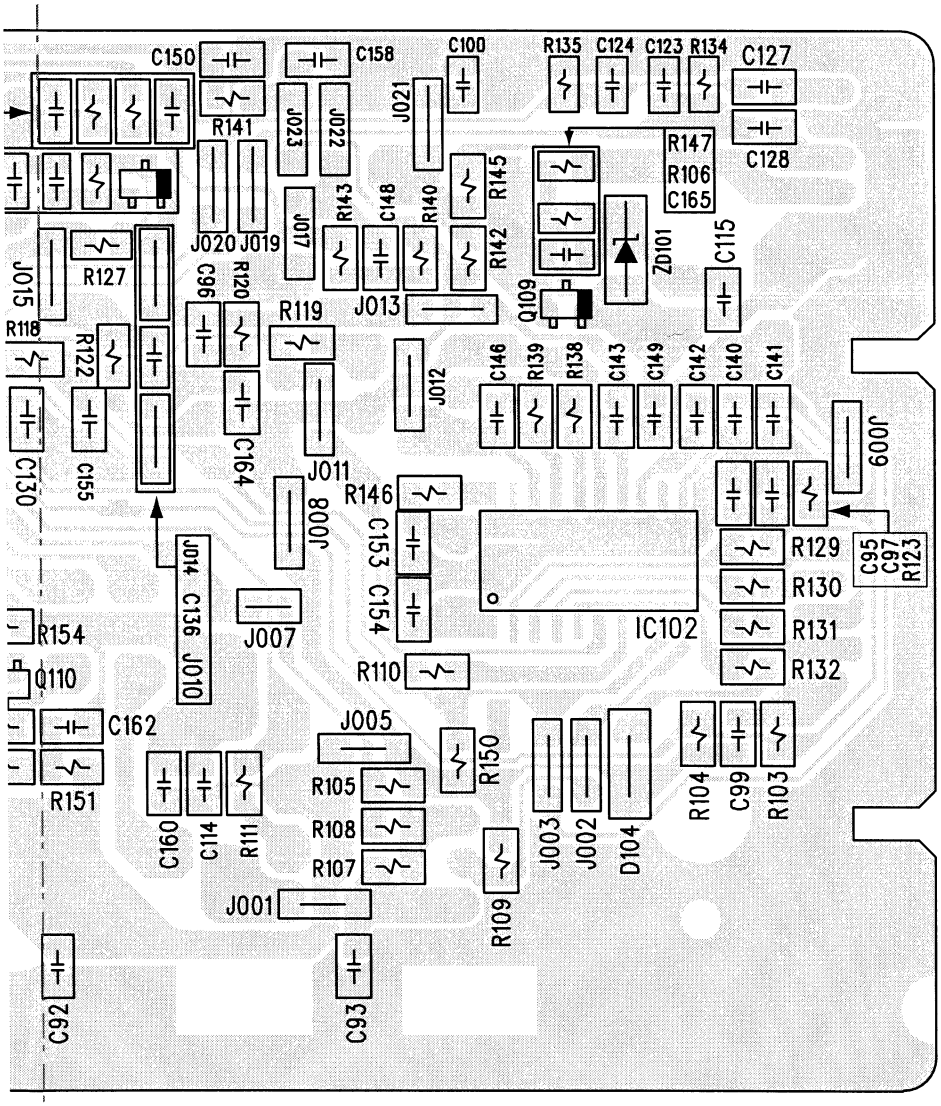


Figure 6-16: WIRING SIDE OF TUNER PWB (TOP VIEW)



Lead-free solder is used in this PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

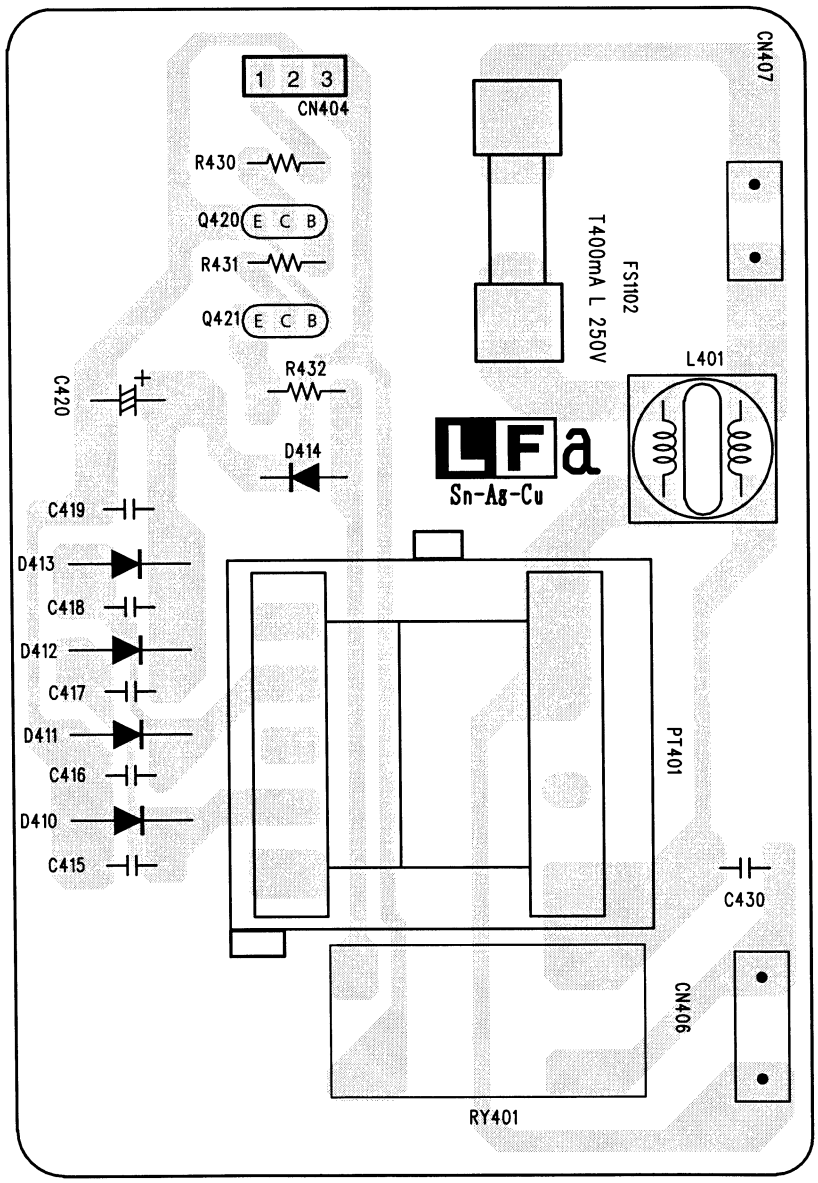
Figure 6-17: WIRING SIDE OF TUNER PWB (BOTTOM VIEW)



7 8 9 10 11 12

Figure 6-18: WIRING SIDE OF TUNER PWB (BOTTOM VIEW)

RECTIFIER PWB-C



LFa
Sn-Ag-Cu
← Lead-free solder indication

Lead-free solder is used in the RECTIFIER PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

Figure 6-19: WIRING SIDE OF RECTIFIER PWB

-MEMO-

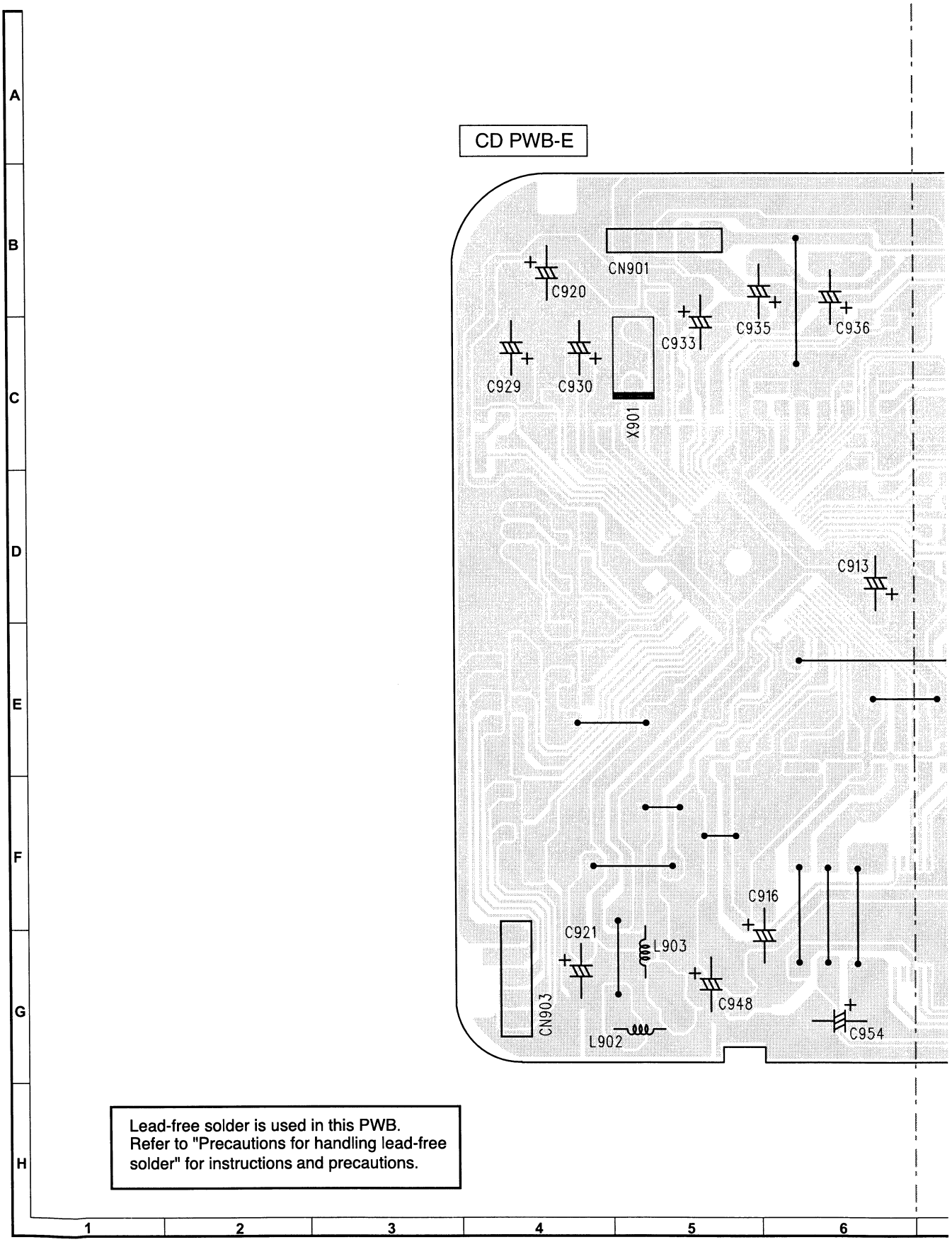
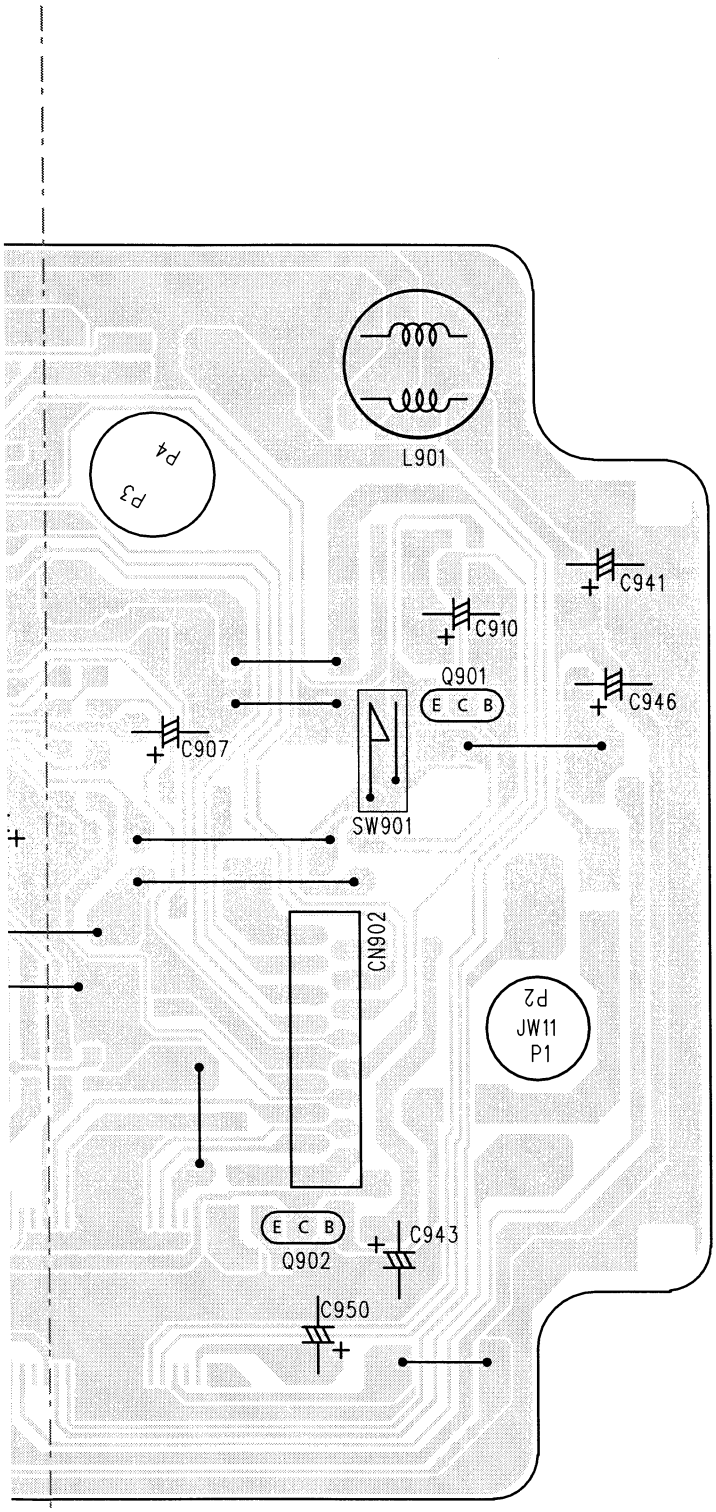


Figure 6-22: WIRING SIDE OF CD SERVO PWB (TOP VIEW)



7 | 8 | 9 | 10 | 11 | 12

Figure 6-23: WIRING SIDE OF CD SERVO PWB (TOP VIEW)

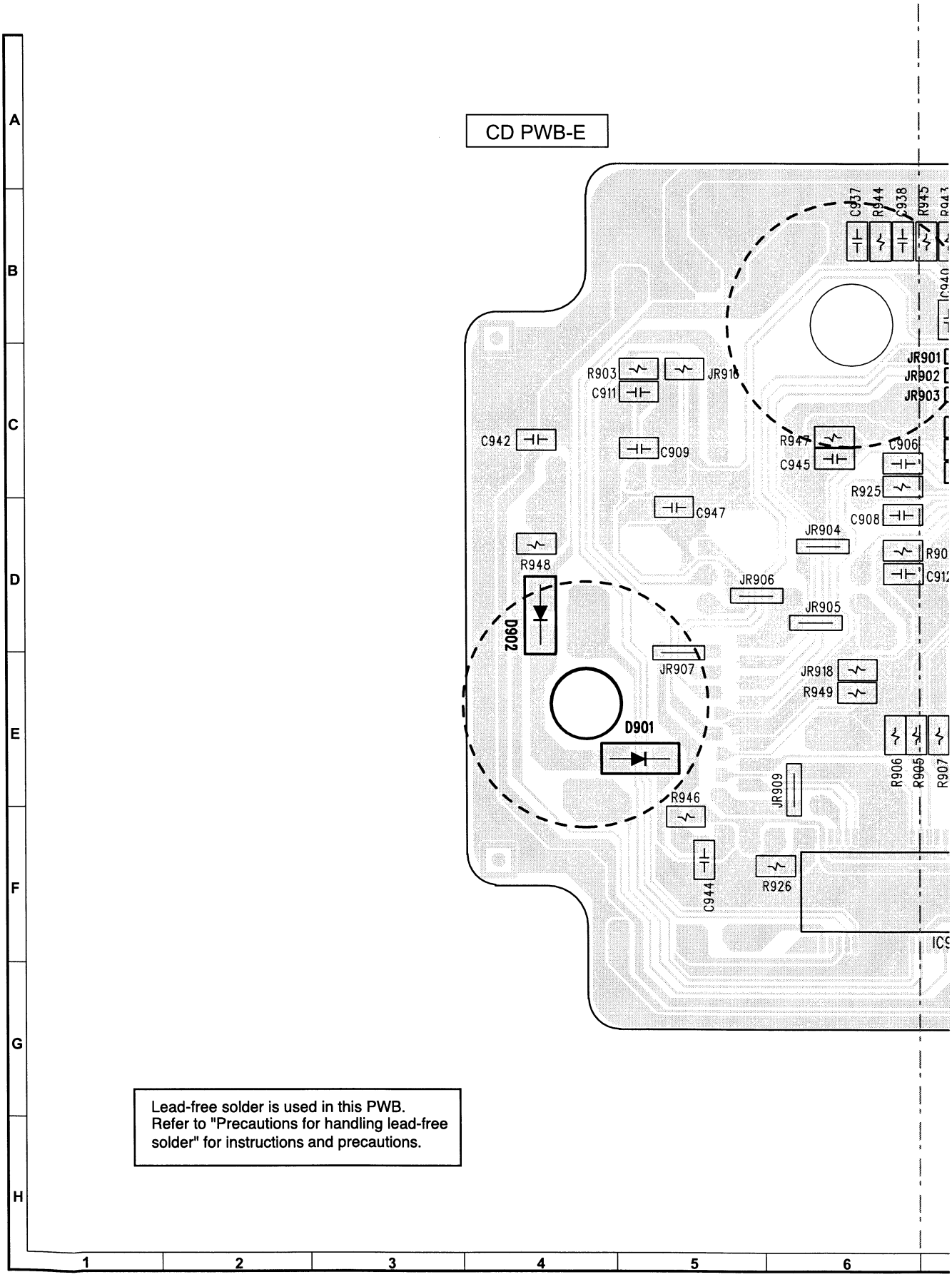


Figure 6-24: WIRING SIDE OF CD SERVO PWB (BOTTOM VIEW)

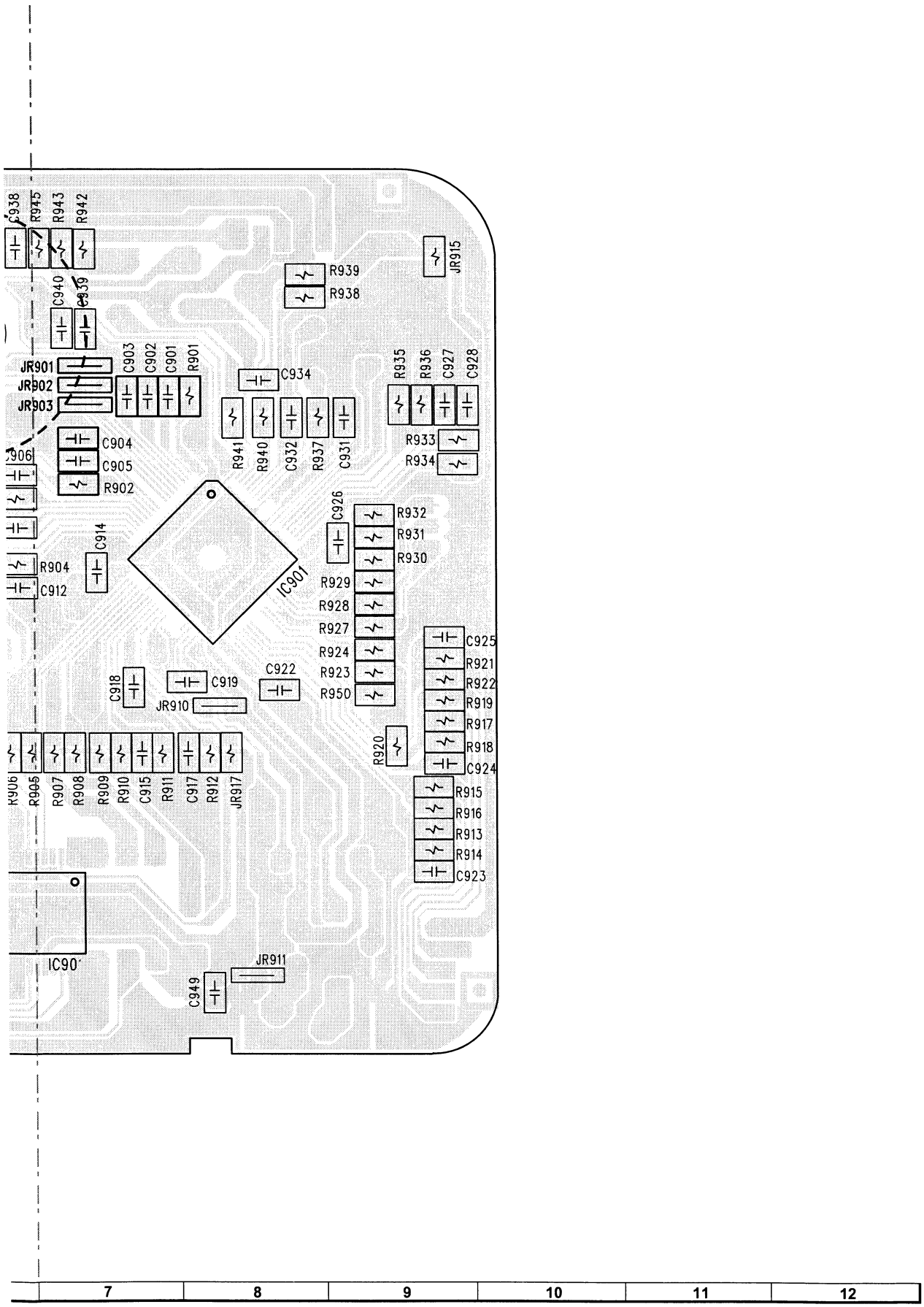


Figure 6-25: WIRING SIDE OF CD SERVO PWB (BOTTOM VIEW)

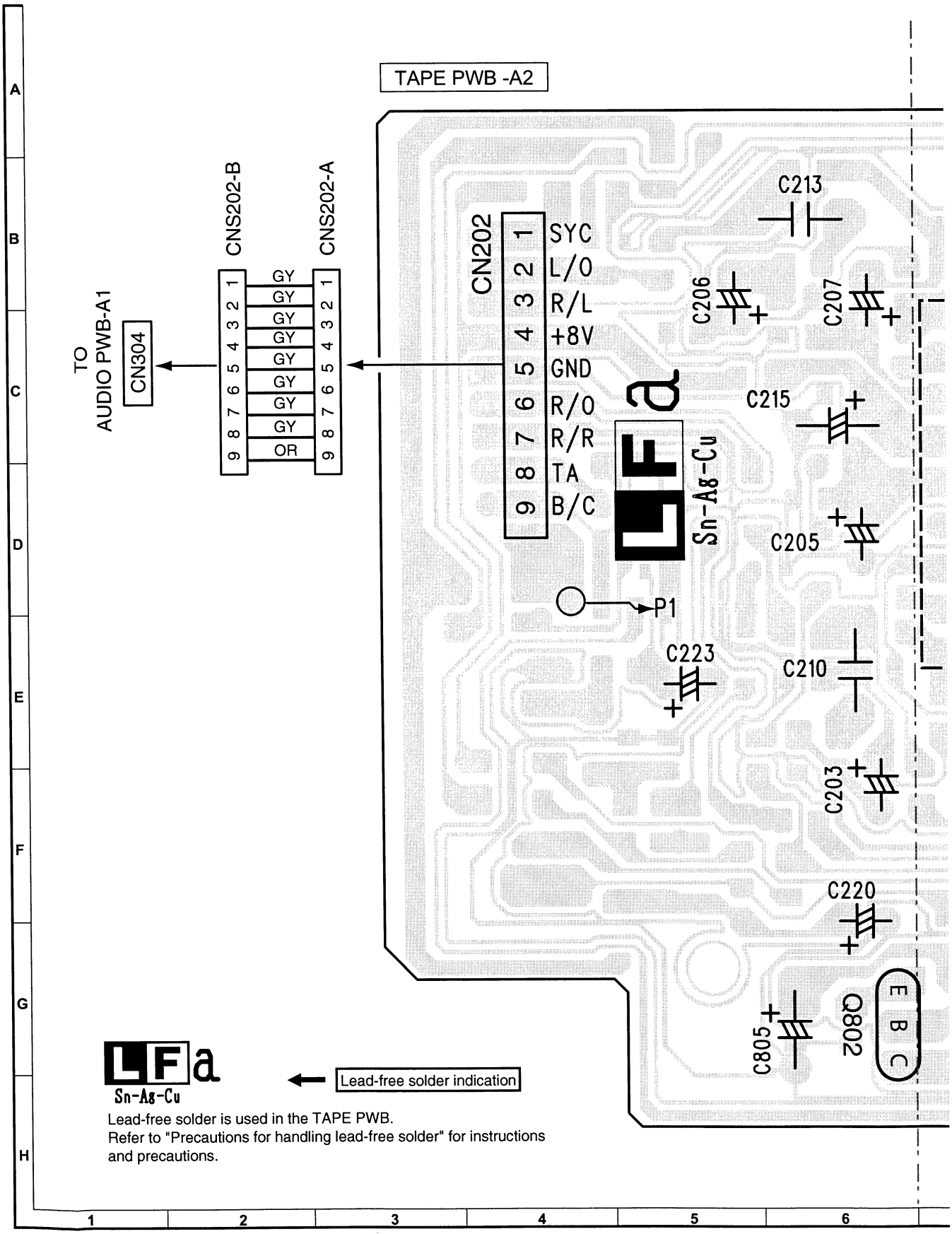
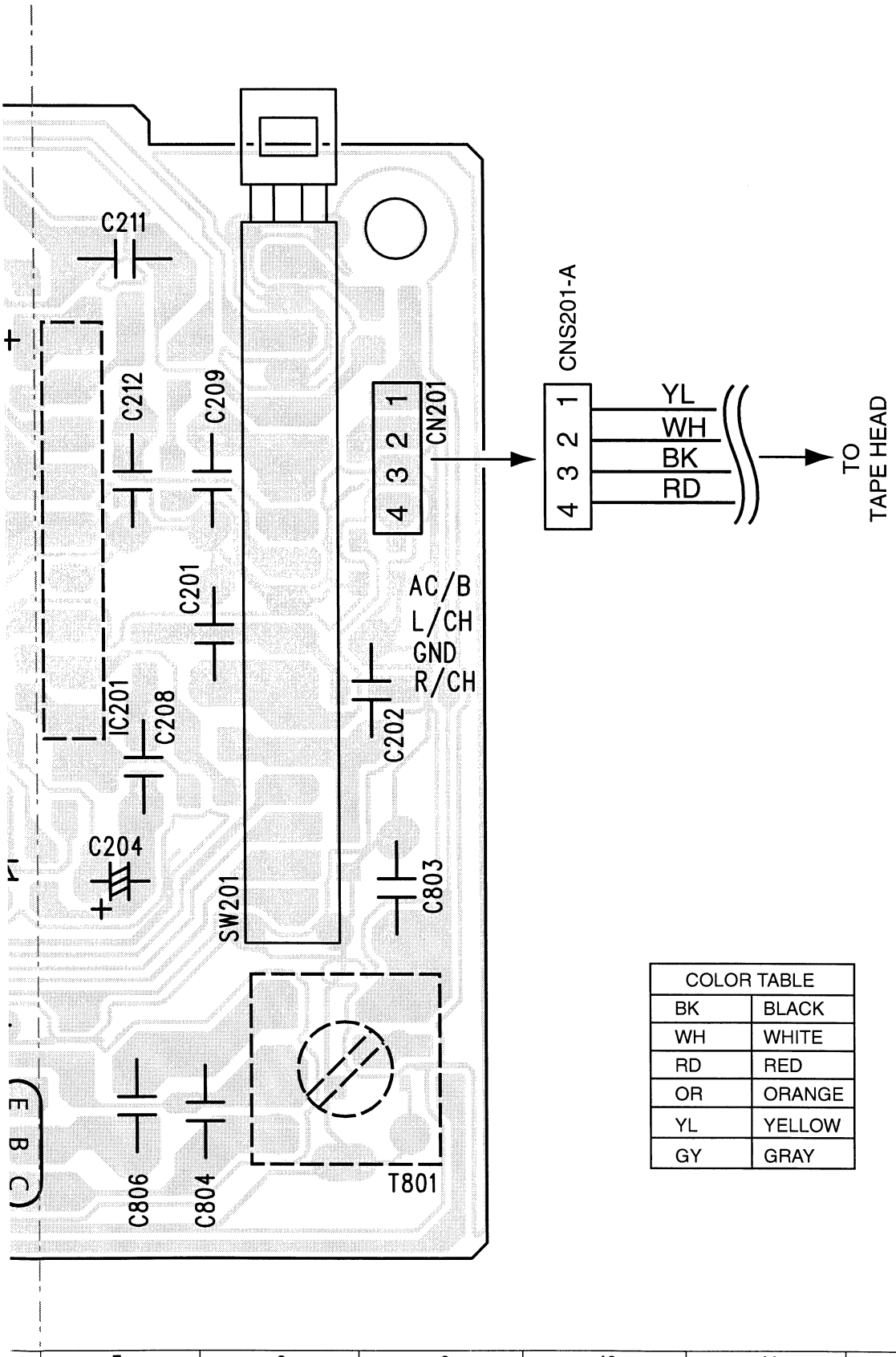


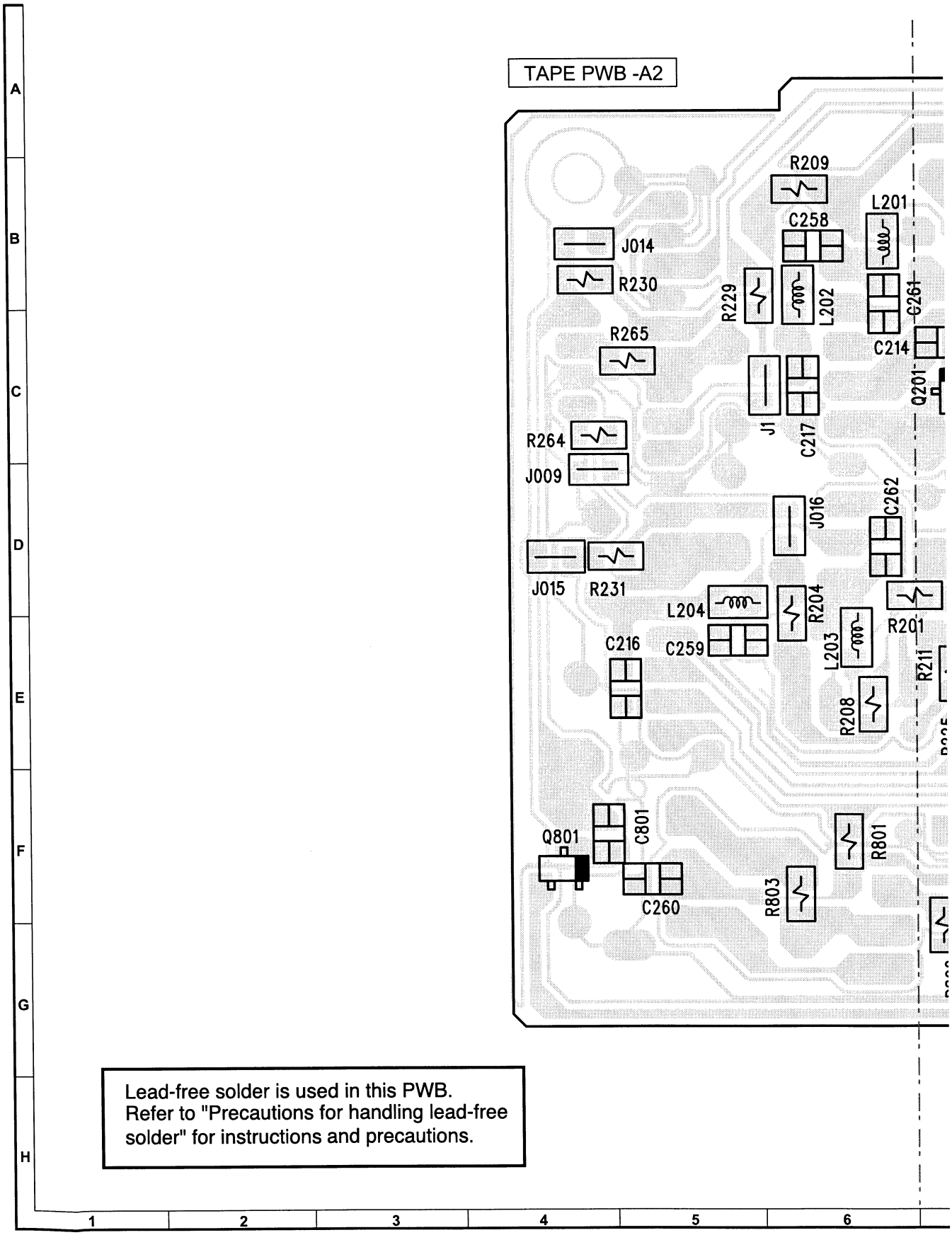
Figure 6-26: WIRING SIDE OF TAPE PWB (TOP VIEW)



COLOR TABLE	
BK	BLACK
WH	WHITE
RD	RED
OR	ORANGE
YL	YELLOW
GY	GRAY

7 8 9 10 11 12

Figure 6-27: WIRING SIDE OF TAPE PWB (TOP VIEW)



Lead-free solder is used in this PWB.
Refer to "Precautions for handling lead-free solder" for instructions and precautions.

Figure 6-28: WIRING SIDE OF TAPE PWB (BOTTOM VIEW)

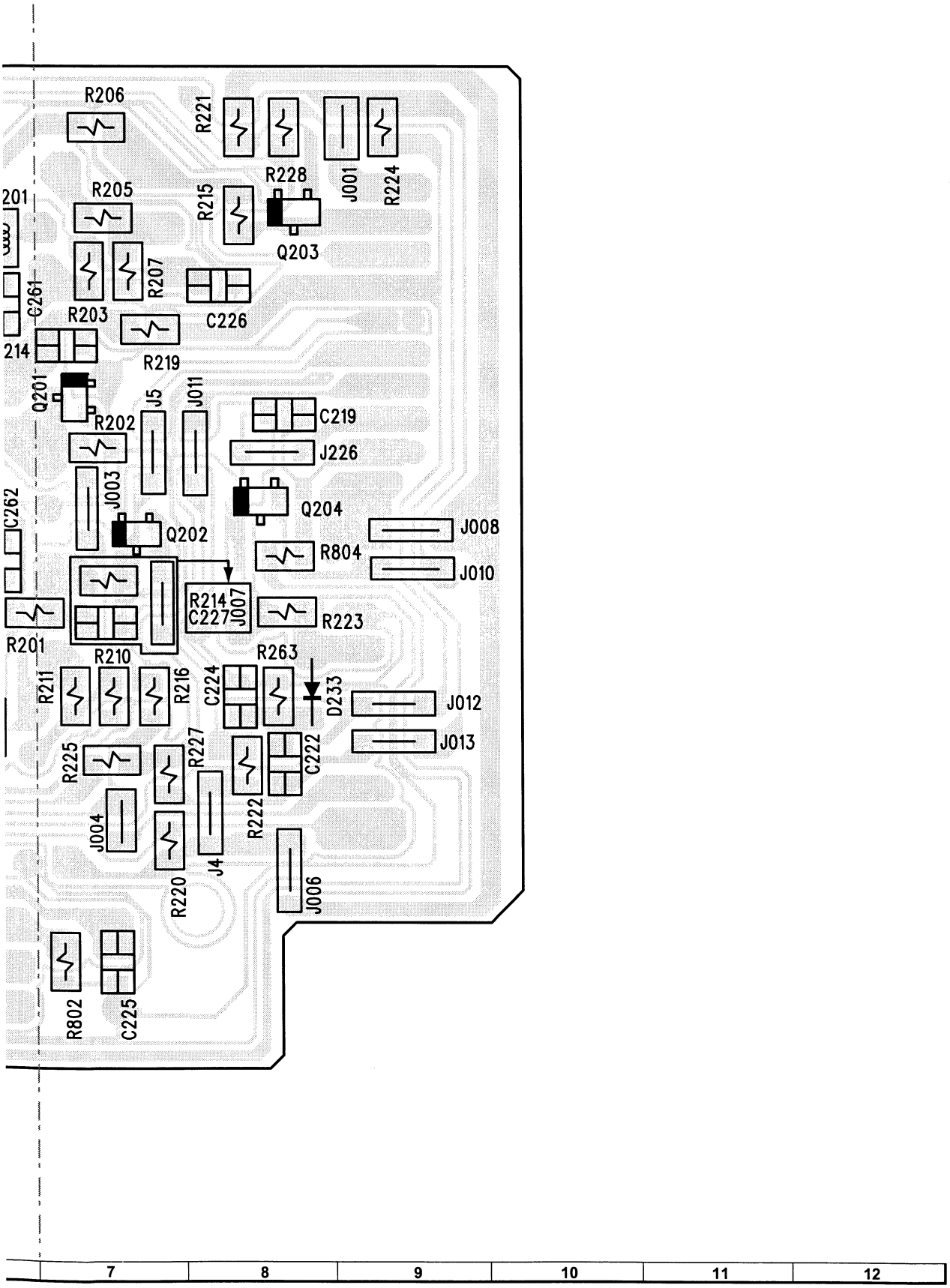


Figure 6-29: WIRING SIDE OF TAPE PWB (BOTTOM VIEW)

-MEMO-

CHAPTER 7. FLOWCHART

[1] Troubleshooting

1. When the CD does not function

The CD section may not operate when the objective lens of the optical pickup is dirty. Clean the objective lens, and check the playback operation. When this section does not operate even after the above step is taken, check the following items.

Remove the cabinet and follow the trouble shooting instructions.

"Track skipping and/or no TOC (Table Of Contents) may be caused by build up of dust other foreign matter on the laser pickup lens. Before attempting any adjustment make certain that the lens is clean. If not, clean it as mentioned below."

Turn the power off.

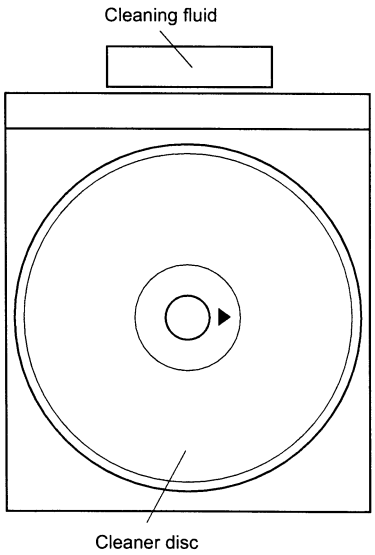
Gently clean the lens with a lens cleaning tissue and a small amount of isopropyl alcohol.

Do not touch the lens with the bare hand.

		Parts code
1.	CD optical pickup Lens cleaner disc	UDSKA0004AFZZ

HOW TO USE

1. Using the brush in the cleaner cap, apply 1 or 2 drops of the cleaning fluid to the brush on the CD cleaner disc which has the mark next to it.
2. Place the CD cleaner disc onto the CD disc tray with the brush side down, then press the play button.
3. You will hear music for about 20 seconds and the CD player will automatically stop. If it still play continuously, press the stop button.



CAUTION

- The CD lens cleaner should be effective for 30-50 operations, however if the brushes become worn out earlier then please replace the cleaner disc.
- If the CD cleaner brushes become very wet then wipe off any excess fluid with a soft cloth.
- Do not drink the cleaner fluid or allow it contact with the eyes. In the event of this happening then drink and / or rinse with clean water and seek medical advice.
- The CD cleaner disc must not be used on car CD players or on computer CD-ROM drives.
- All rights reserved. Unauthorized duplicating, broadcasting and renting this product is prohibited by law.

2. When a CD cannot be played

2.1. Pressing the CD operation key is accepted, but playback does not occur.

1) Focus-RF system check

2) Tracking system check

3) Spin system check

4) Others

CHAPTER 8. OTHERS

[1] Function Table Of IC

IC102 92L31007213100 LC72131M (AM/FM PLL Frequency synthesizer) (1/4)

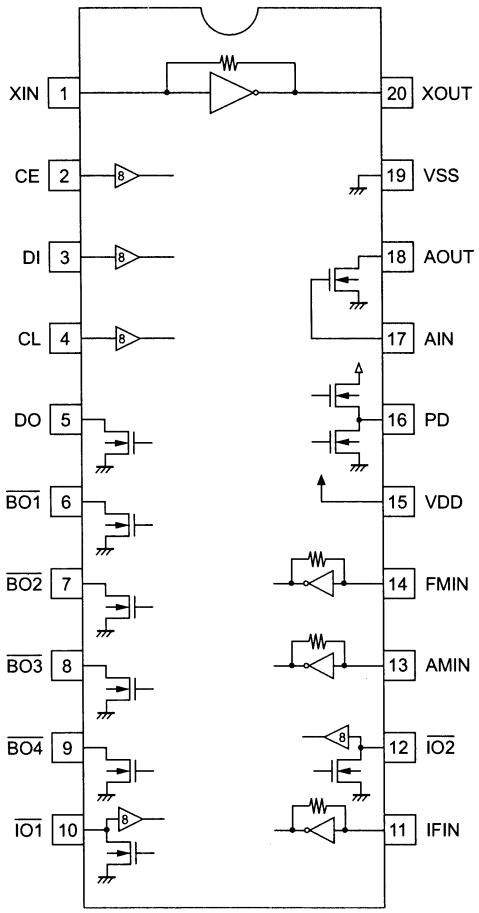


Figure 8-1 BLOCK DIAGRAM OF IC

IC102 92L31007213100 LC72131M (AM/FM PLL Frequency synthesizer) (2/4)

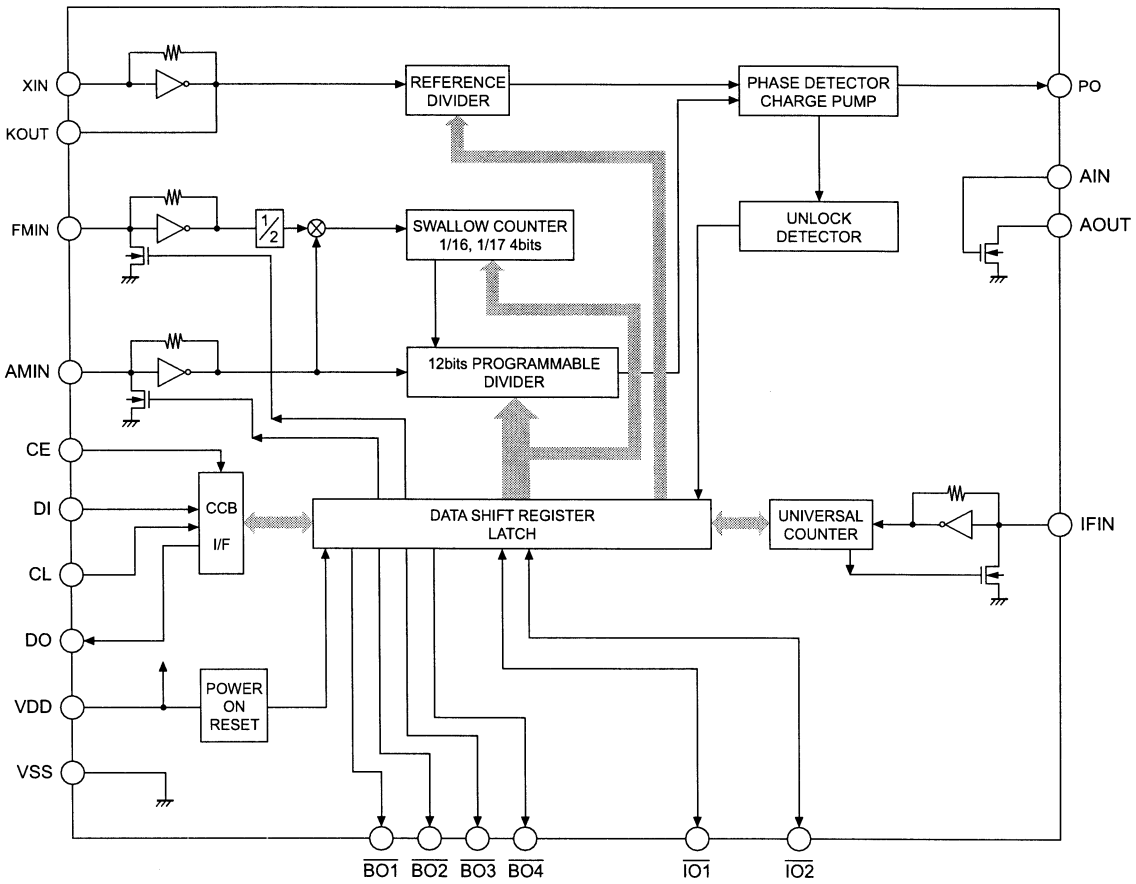
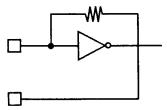
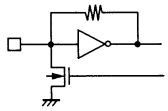
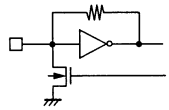
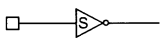
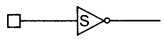
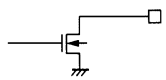


Figure 8-2 BLOCK DIAGRAM OF IC

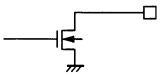
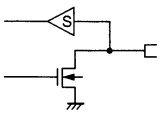
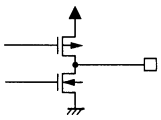
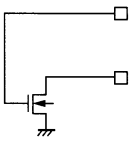
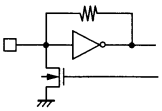
IC102 92L31007213100 LC72131M (AM/FM PLL Frequency synthesizer) (3/4)

PIN DESCRIPTION

Symbol	Pin No. (MFP pin Nos. are in parentheses.)	Type	Functions	Circuit configuration
XIN XOUT	1 (1) 22 (20)	Xtal OSC	• Crystal resonator connection (4.5/7.2 MHz)	 A02598
FMIN	16 (14)	Local oscilator signal input	• FMIN is selected when the serial data input DVS bit is set to 1. • The input frequency range is from 10 to 160 MHz. • The input signal passes through the internal divide-by-two prescaler and is input to the swallow counter. • The divisor can be in the range 275 to 65535. However, since the signal has passed through the divide-by-two prescaler, the actual divisor is twice the set value.	 A02599
AMIN	15 (13)	Local oscilator signal input	• AMIN is selected when the serial data input DVS bit is set to 0. • When the serial data input SNS is set to 1: – The input frequency range is 2 to 40 MHz. – The signal is directly input to the swallow counter. – The divisor can be in the range 272 to 65535, and the divisor used will be the value set. • When the serial data input SNS bit is set to 0: – The input frequency range is 0.5 to 10 MHz. – The signal is directly input to a 12-bit programmable divider. – The divisor can be in the range 4 to 4095, and the divisor used will be the value set.	 A02599
CE	3 (2)	Chip enable	• Set this pin high when inputing (DI) or outputting (DO) serial data.	 A02500
CL	5 (4)	Clock	• Used as the synchronization clock when inputting (DI) or outputting (DO) serial data.	 A02500
DI	4 (3)	Data input	• Inputs serial data transferred from the controller to the LC72131.	 A02500
DO	6 (5)	Data output	• Outputs serial data transferred from the LC72131 to the controller. The content of the output data is determined by the serial data DOC0 to DOC2.	 A02601
V_{DD}	17 (15)	Power supply	• The LC72131 power supply pin (V_{DD} = 4.5 to 5.5 V). • The power on reset circuit operates when power is first applied.	–
V_{SS}	21 (19)	Ground	• The LC72131 ground.	–

IC102 92L31007213100 LC72131M (AM/FM PLL Frequency synthesizer) (4/4)

PIN DESCRIPTION

Symbol	Pin No. (MFP pin Nos. are in parentheses.)	Type	Functions	Circuit configuration
$\overline{BO1}$ $\overline{BO2}$ $\overline{BO3}$ $\overline{BO4}$	7 (6) 8 (7) 9 (8) 10 (9)	Output port	• Dedicated output pins. • The output states are determined by $\overline{BO1}$ to $\overline{BO4}$ bits in the serial data. Data 0 = open, 1 = low • A time base signal (8 Hz) can be output from the $\overline{BO1}$ pin. (When the serial data TBC bit is set to 1.) • Care is required when using the $\overline{BO1}$ pin, since it has a higher on impedance that the other output ports (pins $\overline{BO2}$ to $\overline{BO4}$). • All output ports are set to the open state following a power on reset.	 A02601
$\overline{IO1}$ $\overline{IO2}$	11 (10) 13 (12)	Input/Output port	• I/O dual-use pins. • The direction (input or output) is determined by bits IOC1 and IOC2 in the serial data. Data: 0 = input port, 1 = output port • When specified for use as input ports: The state of the input pin is transmitted to the controller over the DO pin. Input state: low = 0 data value high = 1 data value • When specified for use as output ports: The output states are determined byt the IO1 and IO2 bits in the serial data. Data: 0 = open, 1 = low • These pins function as input pins following a power on reset.	 A02602
PO	18 (16)	Charge pump output	• PLL charge pump output. When the frequency generated by dividing the local oscillaotr frequency by N is higher than the reference frequency, a high level is output from the PO pin. Similarly, when that frequency is lower, a low level is putput. The PO pin goes to the high impedance state when the frequencies match.	 A02603
AIN AOUT	19 (17) 20 (18)	LPF amplifier transistor	• The n-channel MOS transistor used for the PLL active low-pass filter.	 A02604
IFIN	12 (11)	IF counter	• Accepts an input in the frequency range 0.4 to 12 MHz. • The input signal is directly transmitted to the IF counter. • The result is output starting the MSB of the IF counter using the DO pin. • Four measurement periods are supported: 4, 8, 32, and 64 ms.	 A02599

IC101 92L31000183200 LA1832 (TUNER IC)

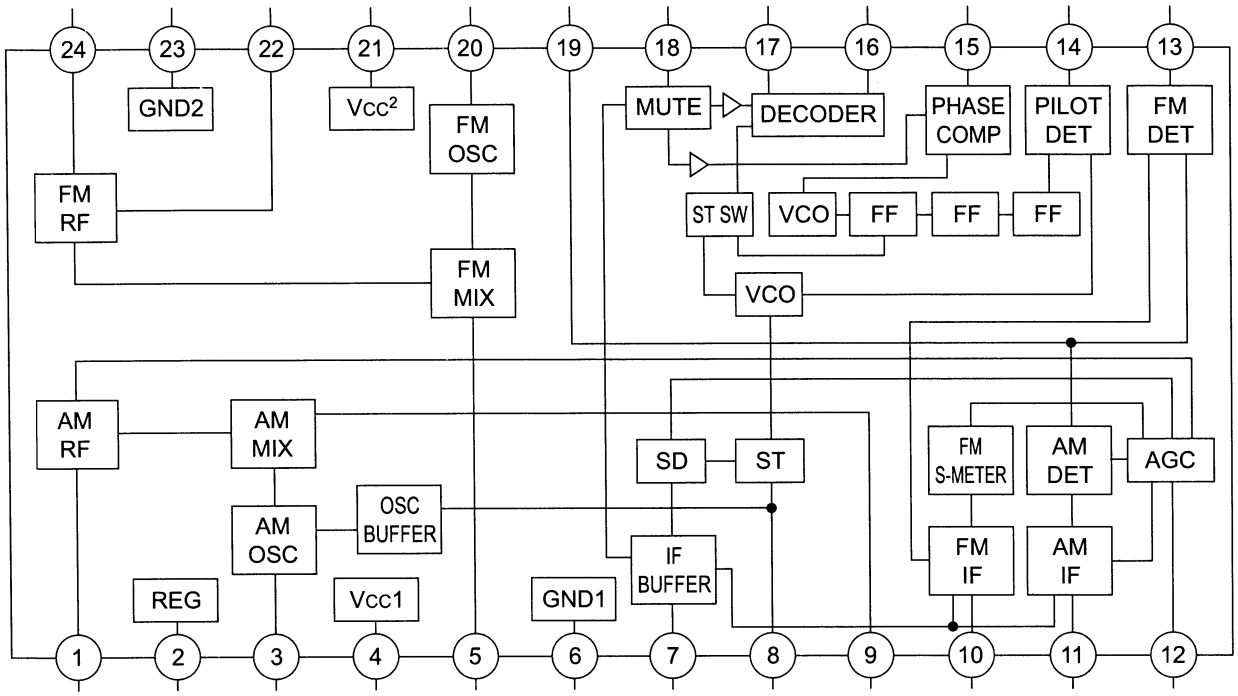


Figure 8-3 BLOCK DIAGRAM OF IC

IC701 92L31087780001 LC87F7CC8A (MICRO COMPUTER IC) (1/3)

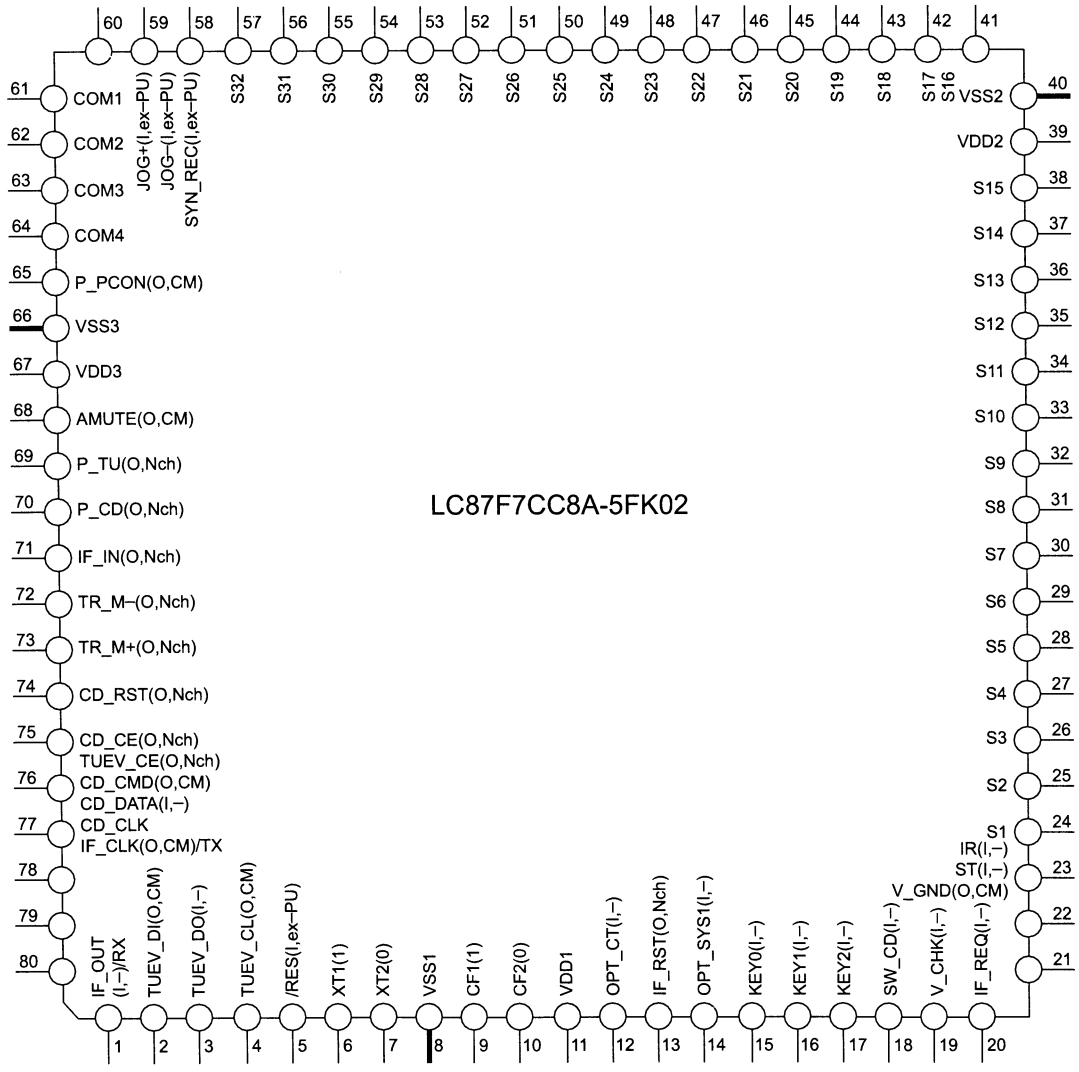


Figure 8-4 BLOCK DIAGRAM OF IC

IC701 92L31087780001 LC87F7CC8A (MICRO COMPUTER IC) (2/3)

PIN DESCRIPTION

Pin	Pin Name	Input/Output	Input/Output Config	Description
1	TUEV_CL	Output	CMOS	Serial clock for PLL, EVOL (valid data; rise edge)
2	TUEV-DI	Output	CMOS	Data-out for PLL, EVOL (Normal Low)
3	ST	Input	NO PU & PD	Tuner Stereo
4	SD	Input	NO PU & PD	Tuner SD
5	RES#	Input	ex-PU	Low Reset
6	XT1			32K Crystal
7	XT2			
8	VSS1			Connect to VSS
9	CF1			Max: 10M ceramic
10	CF2			
11	VDD1			Connect to V2
12	OPT_CT	Input	NO PU & PD	Tuner 7-country option code
13	OPT_CC	Input	NO PU & PD	8-Remote customer code (000-111)
14	OPT_SYS1	Input	NO PU & PD	System Option (Tray/Top and Aux/Phone)
15	KEY0	Input	NO PU & PD	12-Key input (R-ladder)
16	KEY1	Input	NO PU & PD	12-Key input (R-ladder)
17	KEY2	Input	NO PU & PD	12-Key input (R-ladder)
18	SW_CD	Input	NO PU & PD	CD door switch detection (open_sw/close_sw)
19	V-CHK	Input	NO PU & PD	For AC failure detection (Vth-4.5V)
20	RDS_CLK	Input	NO PU & PD	Tuner RDS Clock
21	V_GND	Output	CMOS	Driver reset circuit for HOLD-ENTRY check
22	RS_DATA	Input	NO PU & PD	Tuner RDS Serial Data Input
23	IR	Input	NO PU & PD	Remote control signal input
24	S1	Output		LCD Display
25	S2	Output		
26	S3	Output		
27	S4	Output		
28	S5	Output		
29	S6	Output		
30	S7	Output		
31	S8	Output		
32	S9	Output		
33	S10	Output		
34	S11	Output		
35	S12	Output		
36	S13	Output		
37	S14	Output		
38	S15	Output		
39	VDD2			Connect to v2
40	VSS2			Connect to VSS
41	S16	Output		LCD Display
42	S17	Output		
43	S18	Output		
44	S19	Output		
45	S20	Output		
46	S21	Output		
47	S22	Output		
48	S23	Output		
49	S24	Output		
50	S25	Output		
51	S26	Output		
52	S27	Output		
53	S28	Output		
54	S29	Output		
55	S30	Output		
56	S31	Output		
57	S32	Output		

XL-MP2H

Pin	Pin Name	Input/Output	Input/Output Config	Description
58	SYNC_REC	Input	ex-PU	Mech Deck Sync Rec
59	JOG-	Input	ex-PU	JOG vol input
60	JOG-	Input	ex-PU	JOG vol input
61	COM1	Output		COM-4 Pin connect to LCD PANEL
62	COM2	Output		
63	COM3	Output		
64	COM4	Output		
65	P_PCON	Output	CMOS	Main power control (H:power on)
66	VSS3	Output		Connect to VSS3
67	VDD3	Output		Connect to VDD3
68	AMUTE	Output	CMOS	For CD and P-AMP audio muting (H:mute active)
69	P_TU	Output	Nch(ex-PU on MCU board)	Tuner power control (H:Tuner power on)
70	P_CD	Output	Nch(ex-PU on MCU board)	CD power control (H:CD power on)
71	CLK_SHIFT	Output	Nch(ex-PU on MCU board)	Clock shift (impedance changing)
72	TR_M-	Output	Nch(ex-PU on CD board)	For CD door close (H:close)
73	TR_M+	Output	Nch(ex-PU on CD board)	For CD door open (H:open)
74	CD_RST	Output	Nch(ex-PU on MCU board)	CD reset (L:reset)
75	CD_CE	Output	Nch(ex-PU on MCU board)	CD Chip enable (H:active)
76	TUEV_CE	Output	CMOS	Tuner chip enable (H:active)
77	CD_CMD	Output	CMOS	CD data in (out from HOST) (normal High)
78	CD_DATA	Input	Nch(w/PU on CD board)	CD data out (read into HOST) (normal High)
79	CD_CLK	Output	CMOS	CD serial clock (from Sub-MCU) (normal High)
80	TUEV_DO	Input	NO PU(ex-PU on Tuner board)	Data-in for PLL (normal Low)

IC901 92L31007869024 LC78690W (CD PLAYER IC)(1/2)

BLOCK DIAGRAM

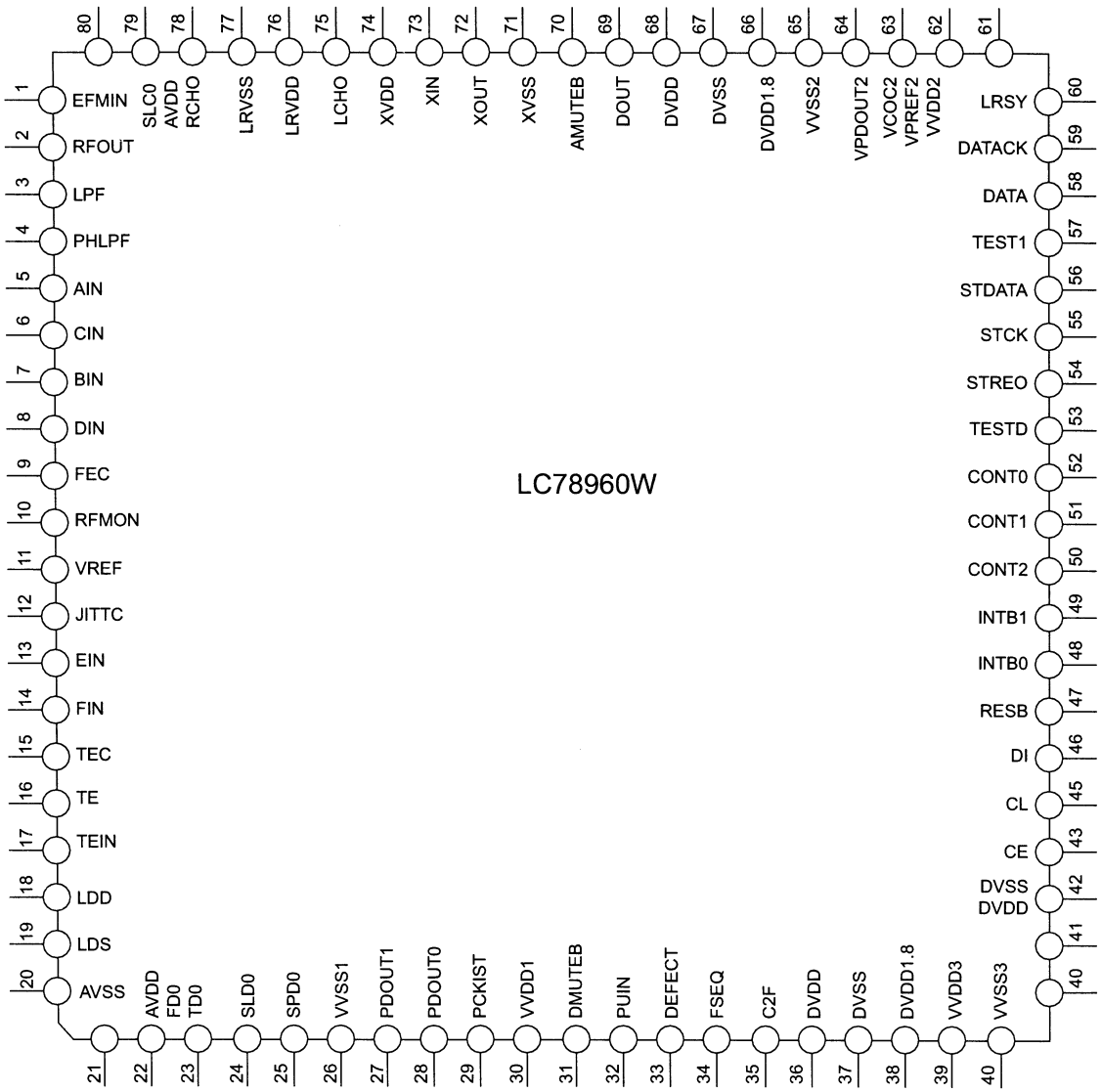


Figure 8-5 BLOCK DIAGRAM OF IC

IC901 92L31007869024 LC78690W (CD PLAYER IC)(2/2)

BLOCK DIAGRAM

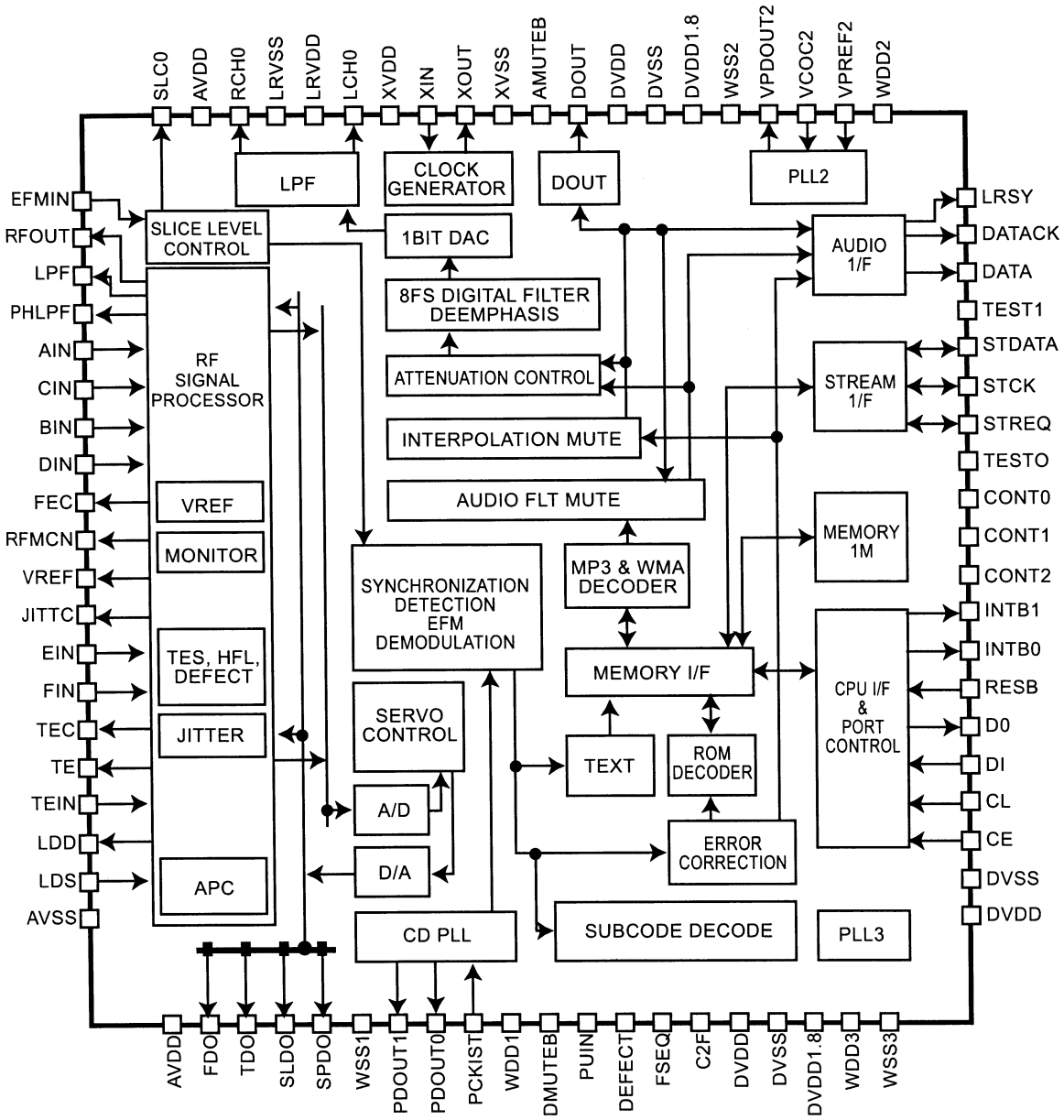
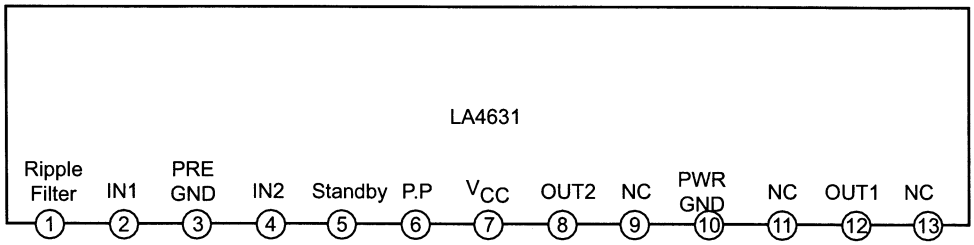


Figure 8-6 BLOCK DIAGRAM OF IC

IC301 92L21046315124 LA4631 (POWER AMPLIFIER)

BLOCK DIAGRAM



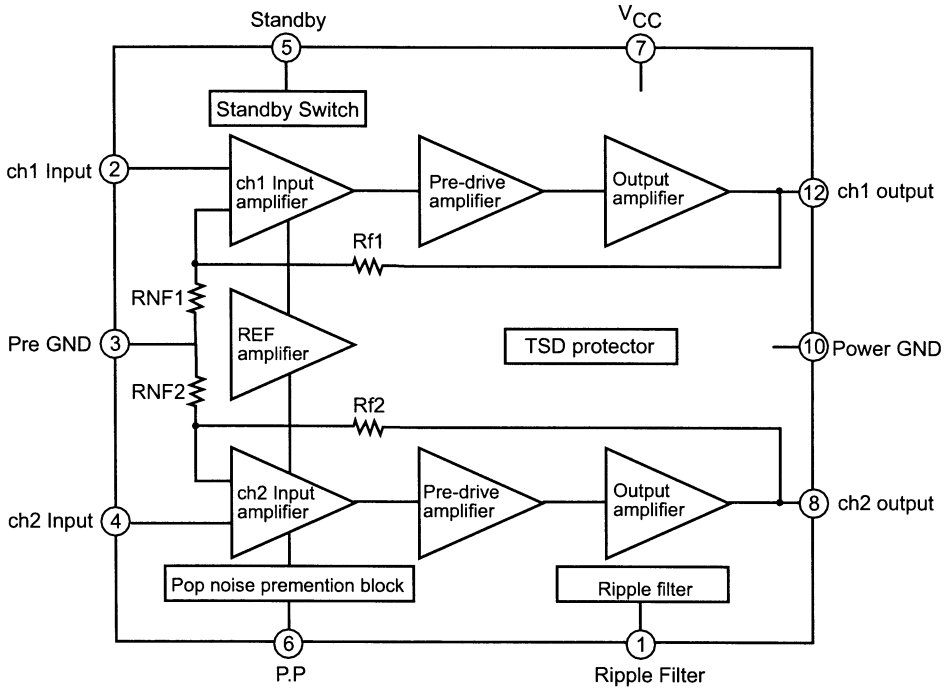


Figure 8-7 BLOCK DIAGRAM OF IC

IC201 92L21000330800 BA3308 (DUAL PRE-AMPLIFIER)

BLOCK DIAGRAM

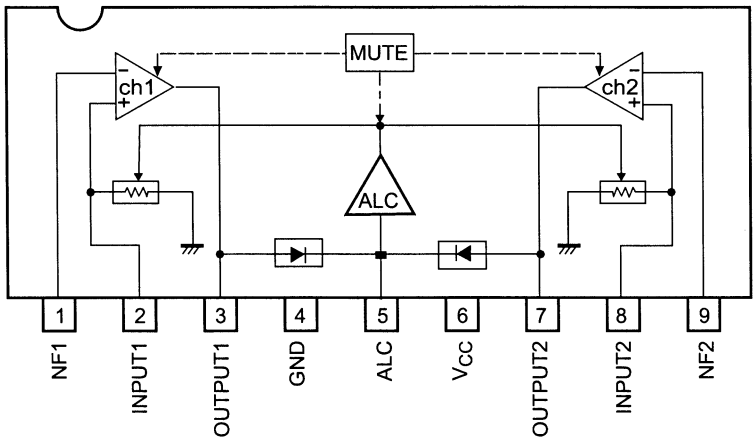


Figure 8-8 BLOCK DIAGRAM OF IC

IC501 92L21007534200 LC75342 (VOLUME AND TONE CONTROL)(1/2)

BLOCK DIAGRAM

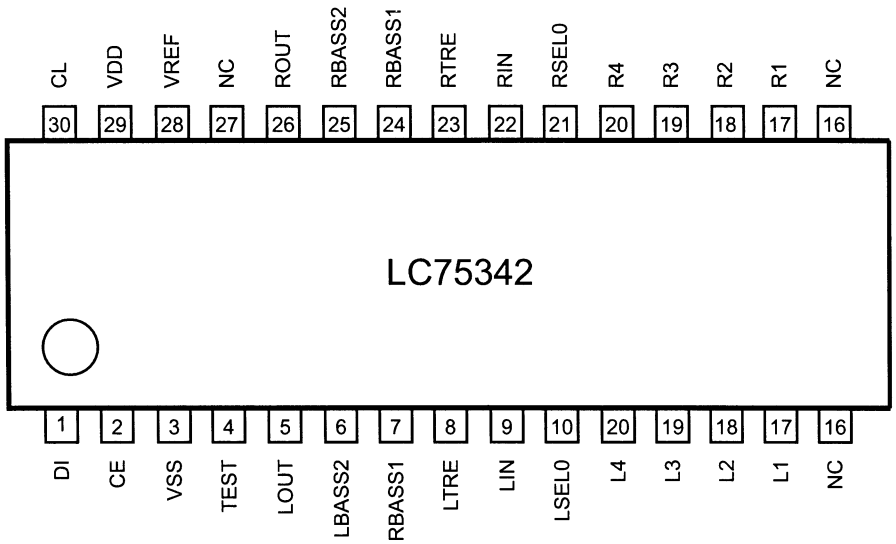


Figure 8-9 BLOCK DIAGRAM OF IC

IC501 92L21007534200 LC75342 (VOLUME AND TONE CONTROL)(2/2)

BLOCK DIAGRAM

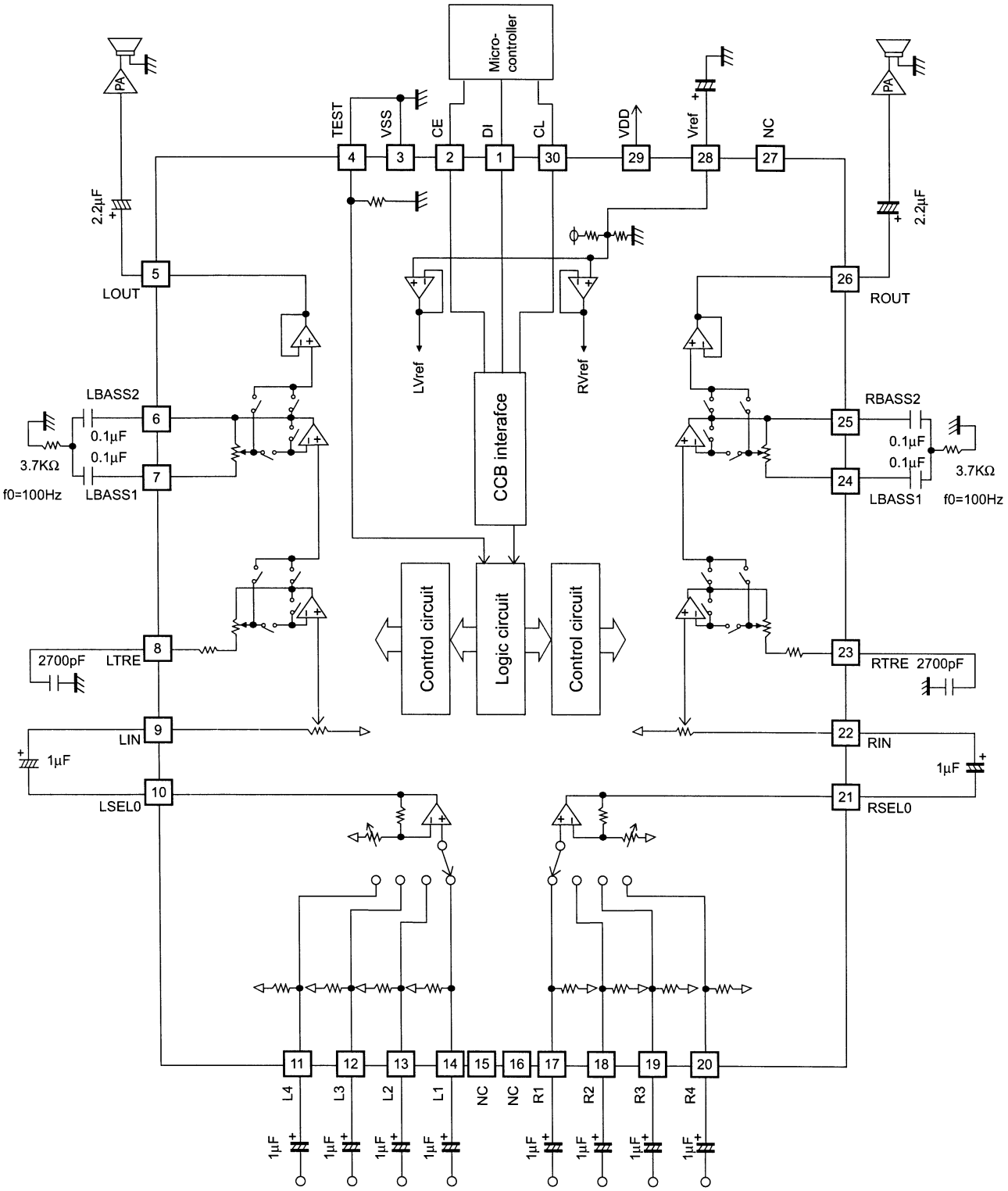


Figure 8-10 BLOCK DIAGRAM OF IC

IC902 92L31000654800 LA6548 (DRIVER IC)

BLOCK DIAGRAM

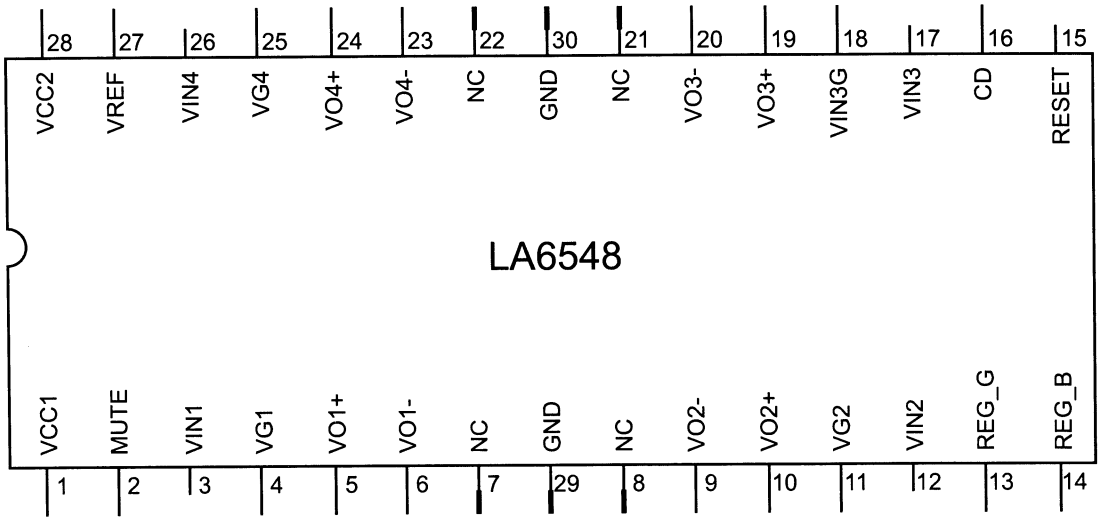
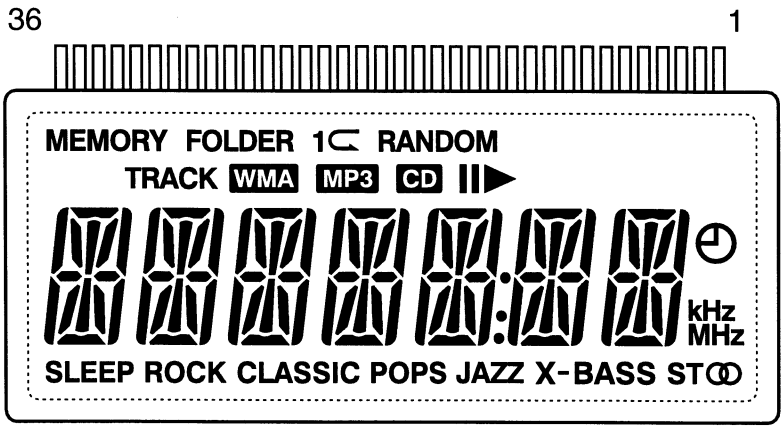


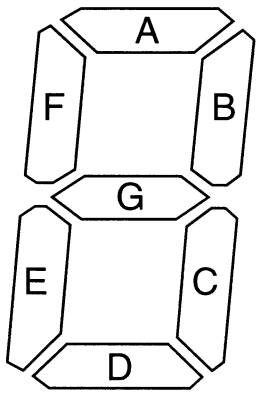
Figure 8-11 BLOCK DIAGRAM OF IC

[2] LCD Display

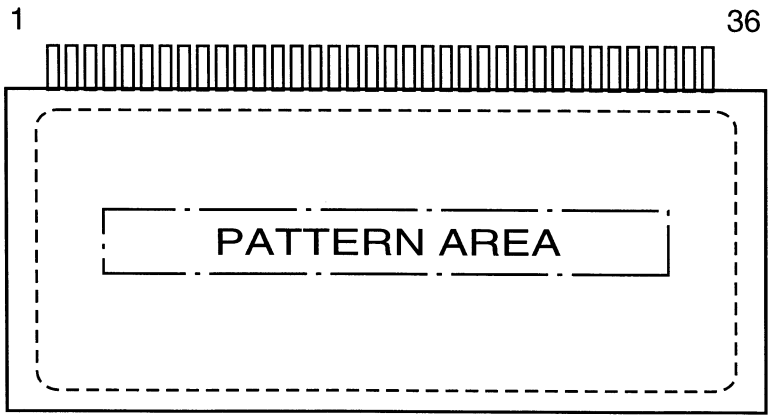
LCD701 92L22010693061

GRID ASSIGNMENT





OUTER DIMENSIONS



-MEMO-

SHARP PARTS GUIDE

MICRO COMPONENT SYSTEM

MODEL XL-MP2H

XL-MP2H Micro Component System consisting of XL-MP2H (main unit) and CP-MP2H (speaker system).

CONTENTS

[1]INTEGRATED CIRCUITS

[2]TRANSISTORS

[3]DIODES

[4]FILTERS

[5]TRANSFORMERS

[6]COILS

[7]VIBRATORS/CRYSTALS

[8]CAPACITORS

[9]RESISTORS

[10]OTHER CIRCUITRY PARTS

[11]CABINET PARTS

[12]ACCESSORIES / PACKING PARTS

[13]P.W.B. ASSEMBLY (Not Replacement Item)

[14]OTHER SERVICE PARTS

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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The contents are subject to change without notice.

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[1] INTEGRATED CIRCUITS					
IC101	92L31000182300				LA-1823
IC102	92L31007213100				LC-72131
IC201	92L21000330800	AH			BA-3308
IC301	92L21046315124				LA-4631
IC401	92L21000780801				KIA7808
IC501	92L21007534200				LC75342
IC701	92L31087780001				LC87F7CC8A
IC901	92L31007869024				LC78690W
IC902	92L31000654800				LA6548
[2] TRANSISTORS					
Q107	92L30700901880				9018-H
Q108	92L20700333000				2SC-3330U
Q109	92L30700805030	AC			8050C/D
Q110	92L30700901880				9018-H
Q201	92L30700901430	AB			9014C
Q202	92L30700901430	AB			9014C
Q203	92L30700901430	AB			9014C
Q301	92L20719193613				2SD-1936-S-AC
Q302	92L20719193613				2SD-1936-S-AC
Q303	92L20700855020				8550B/C
Q305	92L20700805030	AC			8050C/D
Q310	92L20700901430	AB			9014C
Q401	92L20700077250				B772Y
Q402	92L20700901430	AB			9014C
Q403	92L20719092810	AE			KSA-928A
Q404	92L20700901430	AB			9014C
Q405	92L20700901430	AB			9014C
Q406	92L20700901430	AB			9014C
Q407	92L20700805030	AC			8050C/D
Q408	92L20700855020				8550B/C
Q409	92L20700901430	AB			9014C
Q410	92L20700805030	AC			8050C/D
Q420	92L20700901430	AB			9014C
Q421	92L20700901530	AB			9015C
Q501	92L20719193613				2SD-1936-S-AC
Q502	92L20719193613				2SD-1936-S-AC
Q701	92L30700901530				9015C
Q702	92L30700901430	AB			9014C
Q703	92L30700901530				9015C
Q704	92L30700901530				9015C
Q705	92L30700855020	AC			8550B/C
Q801	92L30700901430	AB			9014C
Q802	92L20700805030	AC			8050C/D
Q901	92L20719060840				2SA-608NF
Q902	92L20719076440	AE			2SB-764-D
[3] DIODES					
D101	92L30610414800	AB			IN1418
D102	92L30610414800	AB			IN1418
D104	92L30610414800	AB			IN1418
D105	92L30610414800	AB			IN1418
D106	92L30610414800	AB			IN1418
D301	92L20610414800	AB			IN-4148
D302	92L20610414800	AB			IN-4148
D401	92L20610414800	AB			IN-4148
D402	92L20630400100	AB			IN-4001
D404	92L20630539300				IN-5393
D405	92L20630539300				IN-5393
D407	92L20610414800	AB			IN-4148
D408	92L20610414800	AB			IN-4148
D409	92L20610414800	AB			IN-4148
D410	92L20630400100	AB			IN-4001
D411	92L20630400100	AB			IN-4001
D412	92L20630400100	AB			IN-4001
D413	92L20630400100	AB			IN-4001
D414	92L20610414800	AB			IN-4148
D418	92L20610414800	AB			IN-4148
D701	92L30610414800	AB			IN1418
D702	92L30610414800	AB			IN1418
D704	92L30610414800	AB			IN1418
D705	92L30610414800	AB			IN1418
D706	92L30610414800	AB			IN1418
D1101	92L20630540100				IN-5401
D1102	92L20630540100				IN-5401
D1103	92L20630540100				IN-5401
D1104	92L20630540100				IN-5401
LED701	92L22708030000	AC			LED ROUND TYPE 3mm RED
LED702	92L22708050012	AG			LED ROUND 5mm 53B3SC08 SUPER
RE701	92L20610710000				RPM-7100
ZD101	92L30620005602				ZENER 5.6V 1/2W
ZD401	92L20620006202				ZENER 6.2V 1/2W
ZD402	92L20620005602				ZENER 5.6V 1/2W
ZD701	92L30620003902				ZENER 3.9V 1/2W
ZD702	92L30620003002				ZENER 3.0V 1/2W
ZD703	92L30620003002				ZENER 3.0V 1/2W
ZD704	92L30620003902				ZENER 3.9V 1/2W

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[4] FILTERS					
CF101	92L20887010850				Band Pass Filter
CF102	92L20801073018				Ceramic Filter,10.7Mhz
CF103	92L20801073018				Ceramic Filter,10.7Mhz
CF104	92L20801072018				Ceramic Filter,10.7Mhz
CF105	92L20804503000				450 KHz 3 PINS
CT101	92L21600001018				Trimmer,10pF
CT102	92L21600001018				Trimmer,10pF
T101	92L20918161210				Intermediate.Frequency,RED 10mm
T102	92L20918110410				Intermediate.Frequency,RED
T103	92L20925207010				Intermediate.Frequency,2070 YELLOW 10mm
T801	92L20922363010				Intermediate.Frequency,3630 BLACK 10mm
[5] TRANSFORMER					
⚠ PT1	92L15214236937				POWER (MAIN)
⚠ PT401	92L15240232800				POWER (SUB)
[6] COILS					
L100	92L21304503570				FM Coil 2.5T 4.5x0.7 mm
L101	92L21303504570	AA			FM Coil 3.5T 4.5 x 0.7 mm
L102	92L21302505070				FM Coil 2.5T 4.5x0.7 mm
L104	92L22601000000				Choke Coil 100uH
L201	92L32612015312	AE			Inductor 15uH
L202	92L32612015312	AE			Inductor 15uH
L203	92L32612015312	AE			Inductor 15uH
L204	92L32612015312	AE			Inductor 15uH
L305	92L22600100000				Choke Coil 10uH
L306	92L22600100000				Choke Coil 10uH
L307	92L22600100000				Choke Coil 10uH
L308	92L22600047002				Choke Coil 4.7K
L309	92L22600047002				Choke Coil 4.7K
L401	92L22113007570				Ferrite Bead, 12.5x7.5x0.65mm
L402	92L22600047000				Choke Coil 4.7uH
L701	92L22600100000				Choke Coil 10uH
L702	92L22600100000				Choke Coil 10uH
L501	92L22639300000				Choke Coil 39mH
L502	92L22639300000				Choke Coil 39mH
L703	92L32611010412				Inductor 100uH
L704	92L32611010412				Inductor 100uH
L705	92L32611010412				Inductor 100uH
L706	92L32611010412				Inductor 100uH
L707	92L32611010412				Inductor 100uH
L708	92L32611010412				Inductor 100uH
L901	92L22600260000	AD			Choke Coil 26uH
L902	92L22600220000	AC			Choke Coil 22uH
L903	92L22601000000				Choke Coil 100uH
[7] VIBRATORS/CRYSTALS					
X101A	92L22907200000				CRYSTAL 7.2 MHZ
X701	92L22932768012				CRYSTAL 32.768 KHZ
X702	92L22908000002				CRYSTAL 8 MHZ
X901	92L22816934413				RESONATOR CRA16.9344 MHz
[8] CAPACITORS					
C1	92L00303103850	AB			CERAMIC,0.01 UF/50V +-10%
C2	92L00303103850	AB			CERAMIC,0.01 UF/50V +-10%
C3	92L30231101550	AA			CERAMIC,100 PF/50V
C4	92L30234104250				CERAMIC,0.1UF/50V
C4	92L30231101550	AA			CERAMIC,100 PF/50V
C5	92L00304104850	AB			CERAMIC,0.1 UF/50V
C6	92L30231101550	AA			CERAMIC,100 PF/50V
C6	92L30232102150	AA			CERAMIC,0.1UF/50V
C7	92L30234104250				CERAMIC,0.1UF/50V
C8	92L30234104250				CERAMIC,0.1UF/50V
C9	92L30234104250				CERAMIC,0.1UF/50V
C10	92L30234104250				CERAMIC,0.1UF/50V
C11	92L30234104250				CERAMIC,0.1UF/50V
C12	92L00407107216	AB			ELECTROLYTIC,100 UF/16V
C13	92L30234104250				CERAMIC,0.1UF/50V
C14	92L30234104250				CERAMIC,0.1UF/50V
C15	92L00407107216	AB			ELECTROLYTIC,100 UF/16V
C16	92L30234104250				CERAMIC,0.1UF/50V
C17	92L30234104250				CERAMIC,0.1UF/50V
C18	92L30230100550				CERAMIC10 PF/50V
C19	92L30234104250				CERAMIC,0.1UF/50V
C20	92L30234104250				CERAMIC,0.1UF/50V
C21	92L30234104250				CERAMIC,0.1UF/50V
C22	92L30234104250				CERAMIC,0.1UF/50V
C23	92L30234104250				CERAMIC,0.1UF/50V
C24	92L30234104250				CERAMIC,0.1UF/50V
C25	92L30234104250				CERAMIC,0.1UF/50V
C26	92L30234104250				CERAMIC,0.1UF/50V
C27	92L30234104250				CERAMIC,0.1UF/50V
C28	92L30234104250				CERAMIC,0.1UF/50V
C29	92L30234104250				CERAMIC,0.1UF/50V
C30	92L30234104250				CERAMIC,0.1UF/50V
C31	92L30234104250				CERAMIC,0.1UF/50V
C32	92L30234104250				CERAMIC,0.1UF/50V

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] CAPACITORS					
C33	92L30232102150	AA			CERAMIC,0.001UF/50V
C34	92L30232102150	AA			CERAMIC,0.001UF/50V
C35	92L30232102150	AA			CERAMIC,0.001UF/50V
C36	92L00407107216	AB			ELECTROLYTIC,100 UF/16V
C37	92L30234104250				CERAMIC,0.1UF/50V
C38	92L30231351550	AA			CERAMIC,350 PF/50V
C39	92L30234104250				CERAMIC,0.1UF/50V
C40	92L30230220550	AA			CERAMIC,22 PF/50V
C41	92L30230220550	AA			CERAMIC,22 PF/50V
C42	92L30234104250				CERAMIC,0.1UF/50V
C45	92L30231101550	AA			CERAMIC,100 PF/50V
C46	92L30231101550	AA			CERAMIC,100 PF/50V
C47	92L30231101550	AA			CERAMIC,100 PF/50V
C48	92L30231101550	AA			CERAMIC,100 PF/50V
C49	92L30231101550	AA			CERAMIC,100 PF/50V
C50	92L30231101550	AA			CERAMIC,100 PF/50V
C51	92L30232102150	AA			CERAMIC,0.001UF/50V
C52	92L30232102150	AA			CERAMIC,0.001UF/50V
C53	92L30232102150	AA			CERAMIC,0.001UF/50V
C54	92L30232102150	AA			CERAMIC,0.001UF/50V
C55	92L30232102150	AA			CERAMIC,0.001UF/50V
C56	92L30232102150	AA			CERAMIC,0.001UF/50V
C57	92L30232102150	AA			CERAMIC,0.001UF/50V
C59	92L30232102150	AA			CERAMIC,0.001UF/50V
C60	92L30232102150	AA			CERAMIC,0.001UF/50V
C61	92L30232102150	AA			CERAMIC,0.001UF/50V
C62	92L30232102150	AA			CERAMIC,0.001UF/50V
C63	92L30232102150	AA			CERAMIC,0.001UF/50V
C64	92L30232102150	AA			CERAMIC,0.001UF/50V
C65	92L30232102150	AA			CERAMIC,0.001UF/50V
C66	92L30231101550	AA			CERAMIC,100 PF/50V
C67	92L30231101550	AA			CERAMIC,100 PF/50V
C68	92L30231101550	AA			CERAMIC,100 PF/50V
C69	92L30231101550	AA			CERAMIC,100 PF/50V
C70	92L30231101550	AA			CERAMIC,100 PF/50V
C71	92L30231101550	AA			CERAMIC,100 PF/50V
C72	92L30231101550	AA			CERAMIC,100 PF/50V
C73	92L30231101550	AA			CERAMIC,100 PF/50V
C74	92L30232102150	AA			CERAMIC,0.001UF/50V
C75	92L30231101550	AA			CERAMIC,100 PF/50V
C76	92L30231101550	AA			CERAMIC,100 PF/50V
C77	92L30231101550	AA			CERAMIC,100 PF/50V
C78	92L30230100550				CERAMIC10 PF/50V
C103	92L30220050550	AB			CERAMIC,CAP 5 PF/50V
C104	92L00426106225	AB			ELECTROLYTIC,UF/25V
C105	92L30223223150				CERAMIC,0.022UF/50V
C108	92L20501395005	AB			POLY CAP 390 PF/50V
C110	92L30221151550	AB			CERAMIC,150PF/50V
C112	92L30224104850	AB			CERAMIC,0.1UF/50V
C113	92L00407107210	AB			ELECTROLYTIC,100 UF/10V
C114	92L30223223150	AB			CERAMIC,0.022UF/50V
C115	92L30223103150	AB			CERAMIC,0.01 UF/50V
C116	92L00407107210				ELECTROLYTIC,100 UF/10V
C117	92L00405475250	AC			ELECTROLYTIC,4.7 UF/50V
C118	92L00405335250	AB			ELECTROLYTIC,3.3 UF/50V
C120	92L00405475250				ELECTROLYTIC,4.7 UF/50V
C121	92L00404224250				ELECTROLYTIC,0.22 UF/50V
C122	92L30224104850				CERAMIC,0.1UF/50V
C123	92L00405335250	AB			ELECTROLYTIC,3.3 UF/50V +-20%
C124	92L30223223150				CERAMIC,0.022UF/50V
C125	92L00407107210				ELECTROLYTIC,100 UF/10V
C127	92L30224104850	AB			CERAMIC,0.1UF/50V
C128	92L30224104850				CERAMIC,0.1UF/50V
C129	92L00405475250	AB			ELECTROLYTIC,4.7 UF/50V
C130	92L30222272150				CERAMIC,0.0027 UF/50V
C131	92L30220150550				CERAMIC,15 PF/50V
C132	92L30220150550				CERAMIC,15 PF/50V
C132	92L00390150150				CERAMIC,15 PF/50V
C134	92L30220030550	AB			CERAMIC,3 PF/50V
C136	92L30224104850	AB			CERAMIC,0.1UF/50V
C137	92L30224104850	AB			CERAMIC,0.1UF/50V
C139	92L30220300550				CERAMIC,30 PF/50V
C140	92L30221101550	AB			CERAMIC,100PF/50V
C142	92L30221101550	AB			CERAMIC,100PF/50V
C143	92L30221101550	AB			CERAMIC,100PF/50V
C144	92L00406476216	AB			ELECTROLYTIC,47 UF/16V
C145	92L30224104850	AB			CERAMIC,0.1UF/50V
C146	92L30223103150	AB			CERAMIC,0.01 UF/50V
C147	92L00405335250	AB			ELECTROLYTIC,3.3 UF/50V
C148	92L30223223150				CERAMIC,0.022UF/50V
C149	92L30223223150				CERAMIC,0.022UF/50V
C150	92L00303223850	AB			CERAMIC,0.022 UF/50V
C150	92L30224104850				CERAMIC,0.1UF/50V
C151	92L30224104850				CERAMIC,0.1UF/50V
C151	92L00304104850	AB			CERAMIC,0.1UF/50V
C152	92L00407107210				ELECTROLYTIC,100 UF/10V
C153	92L30220220550				CERAMIC,22 PF/50V
C154	92L30220220550				CERAMIC,22 PF/50V
C155	92L30220050550				CERAMIC,5 PF/50V

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] CAPACITORS					
C156	92L30224104850				CERAMIC,0.1UF/50V
C157	92L30224104850				CERAMIC,0.1UF/50V
C158	92L30224104850				CERAMIC,0.1UF/50V
C159	92L30224104850				CERAMIC,0.1UF/50V
C160	92L30224104850				CERAMIC,0.1UF/50V
C162	92L30222222150				CERAMIC,0.0022 UF/50V
C164	92L30224104850				CERAMIC,0.1UF/50V
C165	92L30224104850				CERAMIC,0.1UF/50V
C166	92L30224104850				CERAMIC,0.1UF/50V
C167	92L30224104850				CERAMIC,0.1UF/50V
C201	92L00502222199	AB			MYLAR, 0.0022 UF/100V +-10
C202	92L00502102199	AB			MYLAR, 0.001 UF/100V +-10%
C203	92L00417107210	AB			ELECTROLYTIC, 100 UF/10V +-20%
C204	92L00425475250	AB			ELECTROLYTIC, 4.7 UF/50V +-20%
C205	92L00416106225	AB			ELECTROLYTIC,10 UF/25V
C206	92L00417107210	AB			ELECTROLYTIC, 100 UF/10V +-20%
C207	92L00425475250	AB			ELECTROLYTIC, 4.7 UF/50V +-20%
C208	92L00502222199	AB			MYLAR, 0.0022 UF/100V +-10
C209	92L00502222199	AB			MYLAR, 0.0022 UF/100V +-10
C210	92L00503333199	AB			MYLAR, 0.033 UF/100V +-10
C211	92L00502222199	AB			MYLAR, 0.0022 UF/100V +-10
C212	92L00502102199	AB			MYLAR, 0.001 UF/100V +-10%
C213	92L00503333199	AB			MYLAR, 0.033 UF/100V +-10
C214	92L30224104250	AA			CERAMIC, 0.1UF/50V +-20%
C215	92L00408108210	AC			ELECTROLYTIC,1000 UF/10V
C216	92L30220070150	AB			CERAMIC, 7 PF/50V +-10%
C217	92L30220070150	AB			CERAMIC, 7 PF/50V +-10%
C219	92L30223103850	AB			CERAMIC, 0.01 UF/50V +80%
C220	92L00416106225	AB			ELECTROLYTIC,10 UF/25V
C225	92L30223223150	AB			CERAMIC,0.022UF/50V
C226	92L30220070150	AB			CERAMIC, 7 PF/50V +-10%
C227	92L30220070150	AB			CERAMIC, 7 PF/50V +-10%
C258	92L30221101550	AB			CERAMIC,100PF/50V +-5%
C259	92L30221101550	AB			CERAMIC,100PF/50V +-5%
C260	92L30223223150	AB			CERAMIC,0.022UF/50V
C261	92L30220470550	AB			CERAMIC,47 PF/50V
C262	92L30220470550	AB			CERAMIC,47 PF/50V
C301	92L00407107216	AB			ELECTROLYTIC,100 UF/16V
C302	92L00407477216	AC			ELECTROLYTIC,470 UF/16V
C303	92L00407107225	AC			ELECTROLYTIC,100 UF/25V +-20%
C304	92L00408228225	AC			ELECTROLYTIC,2200 UF/25V
C305	92L00407477216	AC			ELECTROLYTIC,470 UF/16V
C307	92L00504154199	AC			MYLAR,0.15 UF/100V
C308	92L00504154199	AC			MYLAR,0.15 UF/100V
C309	92L00407107216	AB			ELECTROLYTIC,100 UF/16V
C310	92L00407107216	AB			ELECTROLYTIC,100 UF/16V
C311	92L00405105250	AB			ELECTROLYTIC,1 UF/50V
C312	92L00502102199	AB			MYLAR,0.001 UF/100V
C313	92L00407107216	AB			ELECTROLYTIC,100 UF/16V
C314	92L00502102199	AB			MYLAR,0.001 UF/100V
C315	92L00407107216	AB			ELECTROLYTIC,100 UF/16V
C316	92L00407107216	AB			ELECTROLYTIC,100 UF/16V
C317	92L00405105250	AB			ELECTROLYTIC,1 UF/50V
C318	92L00304104850	AB			CERAMIC,0.1 UF/50V
C319	92L00408108216				ELECTROLYTIC,1000 UF/16V
C320	92L00405475250				ELECTROLYTIC,4.7 UF/50V
C321	92L00405475250	AB			ELECTROLYTIC,4.7 UF/50V
C322	92L00405475250				ELECTROLYTIC,4.7 UF/50V
C323	92L00405475250				ELECTROLYTIC,4.7 UF/50V
C324	92L00405475250				ELECTROLYTIC,4.7 UF/50V
C325	92L00405475250				ELECTROLYTIC,4.7 UF/50V
C326	92L00405475250	AC			ELECTROLYTIC,4.7 UF/50V
C326	92L00301101150				CERAMIC,100 PF/50V +-10%
C327	92L00301101150				CERAMIC,100 PF/50V +-10%
C328	92L00406226250				ELECTROLYTIC,22 UF/50V +-20%
C329	92L00407107216	AB			ELECTROLYTIC,100 UF/16V +-20%
C330	92L00502272199	AC			MYLAR,0.0027 UF/100V +-10%
C331	92L00502272199				MYLAR,0.0027 UF/100V +-10%
C332	92L00405475250	AB			ELECTROLYTIC,4.7 UF/50V +-20%
C333	92L00407227210	AB			MYLAR,0.1 UF/100V +-10%
C335	92L00405475250				ELECTROLYTIC,4.7 UF/50V +-20%
C336	92L00405475250				ELECTROLYTIC,4.7 UF/50V +-20%
C337	92L00405105250	AB			ELECTROLYTIC,1 UF/50V +-20%
C338	92L00301501150	AB			CERAMIC,500 PF/50V +-10%
C339	92L00301501150	AB			CERAMIC,500 PF/50V +-10%
C340	92L00405105250	AB			ELECTROLYTIC,1 UF/50V +-20%
C341	92L00502222199	AB			MYLAR,0.0022 UF/100V +-10
C341	92L00502682199				MYLAR,0.0068 UF/100V +-10%
C342	92L00504104199	AB			MYLAR,0.1 UF/100V +-10%
C344	92L00405475250	AE			ELECTROLYTIC,4.7 UF/50V +-20%
C345	92L00405475250				ELECTROLYTIC,4.7 UF/50V +-20%
C346	92L00502682199				MYLAR,0.0068 UF/100V +-10%
C346	92L00502682199	AB			MYLAR,0.0068 UF/100V +-10%
C347	92L00405475250				ELECTROLYTIC,4.7 UF/50V +-20%
C348	92L00504104199	AC			MYLAR,0.1 UF/100V +-10%
C349	92L00504104199				MYLAR,0.1 UF/100V +-10%
C350	92L00504104199				MYLAR,0.1 UF/100V +-10%
C351	92L00504104199				MYLAR,0.1 UF/100V +-10%
C352	92L00503103199	AB			MYLAR,0.01 UF/100V +-10%

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] CAPACITORS					
C353	92L00503103199	AB			MYLAR,0.01 UF/100V +-10%
C356	92L00302102850	AB			CERAMIC,0.001 UF/50V +80%
C357	92L00302102850	AB			CERAMIC,0.001 UF/50V +80%
C358	92L00302102850	AB			CERAMIC,0.001 UF/50V +80%
C359	92L00303223850	AB			CERAMIC,0.022 UF/50V +80%
C360	92L00302102850	AB			CERAMIC,0.001 UF/50V +80%
C361	92L00302102850	AB			CERAMIC,0.001 UF/50V +80%
C401	92L00408338225				ELECTROLYTIC,3300 UF/25V +-20%
C402	92L00304104850	AB			CERAMIC,0.1 UF/50V +80%
C403	92L00407107216	AB			ELECTROLYTIC,100 UF/16V +-20%
C404	92L00407107216	AB			ELECTROLYTIC,100 UF/16V +-20%
C405	92L00407227216				ELECTROLYTIC,220 UF/16V +-20%
C406	92L00408108225				ELECTROLYTIC,1000 UF/25V +-20%
C407	92L00304104850	AB			CERAMIC,0.1 UF/50V +80%
C408	92L00407107216	AB			ELECTROLYTIC,100 UF/16V +-20%
C409	92L00406226250				ELECTROLYTIC,22 UF/50V +-20%
C410	92L00407227216				ELECTROLYTIC,220 UF/16V +-20%
C412	92L00407107216	AB			ELECTROLYTIC,100 UF/16V +-20%
C501	92L00406226250				ELECTROLYTIC,22 UF/50V +-20%
C502	92L00406226250	AB			ELECTROLYTIC,22 UF/50V +-20%
C503	92L00301101150	AB			CERAMIC,100 PF/50V +-10%
C504	92L00301101150	AB			CERAMIC,100 PF/50V +-10%
C505	92L00407477216	AC			ELECTROLYTIC,470 UF/16V +-20%
C506	92L00304104850	AB			CERAMIC,0.1 UF/50V +80%
C507	92L00304104850	AB			CERAMIC,0.1 UF/50V +80%
C508	92L00407477216	AC			ELECTROLYTIC,100 UF/16V +-20%
C509	92L00301101150	AB			CERAMIC,100 PF/50V +-10%
C510	92L00301101150	AB			CERAMIC,100 PF/50V +-10%
C511	92L00304104850	AB			CERAMIC,0.1 UF/50V +80%
C512	92L00304104850	AB			CERAMIC,0.1 UF/50V +80%
C515	92L00405475250	AB			ELECTROLYTIC,4.7 UF/50V +-20%
C516	92L00405475250				ELECTROLYTIC,4.7 UF/50V +-20%
C517	92L00405475250	AB			ELECTROLYTIC,4.7 UF/50V +-20%
C518	92L00405475250	AB			ELECTROLYTIC,4.7 UF/50V +-20%
C702	92L00304104850	AB			CERAMIC,0.1 UF/50V +80%
C703	92L00304104850	AB			CERAMIC,0.1 UF/50V +80%
C715	92L00406476216	AB			ELECTROLYTIC,47 UF/16V +-20%
C758	92L30232102150	AA			CERAMIC, 0.001UF/50V +-1
C759	92L30234104550	AB			CERAMIC, 0.1UF/50V +-5%
C760	92L30234104550	AB			CERAMIC, 0.1UF/50V +-5%
C761	92L30231101550	AA			CERAMIC, 100 PF/50V +-5%
C801	92L30221501550	AB			CERAMIC, 500PF/50V +-5%
C803	92L00502332199	AB			MYLAR, 0.0033 UF/100V +-10%
C804	92L00503223199	AB			MYLAR, 0.022 UF/100V +-10%
C805	92L00417227210	AC			ELECTROLYTIC, 220 UF/10V +-20%
C806	92L00503103199	AB			MYLAR, 0.01 UF/100V +-10%
C901	92L00417477216	AB			ELECTROLYTIC,470 UF/16V +-20%
C902	92L30234104250	AB			CERAMIC,0.1UF/50V +-20%
C903	92L00417107216	AC			ELECTROLYTIC,100 UF/16V +-20%
C904	92L30234104250	AB			CERAMIC,0.1UF/50V +-20%
C916	92L30234104250				CERAMIC,0.1UF/50V +-20%
C917	92L00416476216	AB			ELECTROLYTIC,47 UF/16V +-20%
C920	92L30234104250	AB			CERAMIC,0.1UF/50V +-20%
C921	92L00416476216	AB			ELECTROLYTIC,47 UF/16V +-20%
C922	92L30234104250				CERAMIC,0.1UF/50V +-20%
C923	92L00416476216	AB			ELECTROLYTIC,47 UF/16V +-20%
C924	92L30230220550	AA			CERAMIC,22 PF/50V
C925	92L30230220550	AA			CERAMIC,22 PF/50V
C926	92L00416476216	AB			ELECTROLYTIC,47 UF/16V +-20%
C927	92L30234104250				CERAMIC,0.1UF/50V +-20%
C928	92L30232102850				CERAMIC,0.001UF/50V +-20%
C929	92L00416476216	AB			ELECTROLYTIC,47 UF/16V +-20%
C930	92L00417107216	AC			ELECTROLYTIC,100 UF/16V +-20%
C931	92L30232102850				CERAMIC,0.001UF/50V +-20%
C932	92L30234104250				CERAMIC,0.1UF/50V +-20%
C933	92L30234104250	AB			CERAMIC,0.1UF/50V +-20%
C934	92L30233223150	AB			CERAMIC,0.022UF/50V +-10%
C935	92L30234104250	AA			CERAMIC,0.1UF/50V +-20%
C936	92L30232102850	AA			CERAMIC,0.001UF/50V +-20%
C937	92L30230470550	AA			CERAMIC,47 PF/50V
C938	92L30232102850				CERAMIC,0.001UF/50V +-20%
C939	92L30234104250	AB			CERAMIC,0.1UF/50V +-20%
C940	92L00417107216	AC			ELECTROLYTIC,100 UF/16V +-20%
C941	92L30232102850	AB			CERAMIC,0.001UF/50V +-20%
C942	92L30232102850	AB			CERAMIC,0.001UF/50V +-20%
C943	92L30234104250	AA			CERAMIC,0.1UF/50V +-20%
C944	92L30232102850	AA			CERAMIC,0.001UF/50V +-20%
C945	92L00416106225	AB			ELECTROLYTIC,10 UF/25V +-20%
C948	92L30232102850	AB			CERAMIC,0.001UF/50V +-20%
C949	92L00417107216	AC			ELECTROLYTIC,100 UF/16V +-20%
C950	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C951	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C952	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C953	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C954	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C955	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C957	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C958	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C959	92L30234104250				CERAMIC,0.1UF/50V +-20%

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] CAPACITORS					
C960	92L30234104250				CERAMIC,0.1UF/50V +-20%
C961	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C962	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C963	92L30234104250				CERAMIC,0.1UF/50V +-20%
C964	92L30231221550	AB			CERAMIC,220 PF/50V +-5%
C965	92L30233103550				CERAMIC,0.01UF/50V +-5%
C966	92L00417107216	AC			ELECTROLYTIC,100 UF/16V +-20%
C967	92L30234104250				CERAMIC,0.1UF/50V +-20%
C969	92L30234104250				CERAMIC,0.1UF/50V +-20%
C971	92L30234104250				CERAMIC,0.1UF/50V +-20%
C974	92L00417107216	AC			ELECTROLYTIC,100 UF/16V +-20%
C976	92L30234104250				CERAMIC,0.1UF/50V +-20%
C978	92L30234104250				CERAMIC,0.1UF/50V +-20%
C990	92L00406476216	AB			ELECTROLYTIC, 47 UF/16V +-20%
C1105	92L00303403850	AH			CERAMIC,0.04 UF/50V +80%
C1107	92L00303403850	AC			CERAMIC,0.04 UF/50V +80%
C1108	92L00303403850	AB			CERAMIC,0.04 UF/50V +80%
C1109	92L00303403850				CERAMIC,0.04 UF/50V +80%
C1110	92L00408478225				ELECTROLYTIC,4700 UF/25V +-20%
CEC1	92L00302502850				CERAMIC, 0.005 UF/50V
[9] RESISTORS					
FR401	92L40300015000				0 OHM (15 mm)
J001	92L30120000518	AA			0 OHM 1/8W
J003	92L30110000514	AA			0 OHM 1/4W
J004	92L30120000518	AA			0 OHM 1/8W
J006	92L30110000514	AA			0 OHM 1/4W
J007	92L30110000514	AA			0 OHM 1/4W
J008	92L30110000514	AA			0 OHM 1/4W
J011	92L30110000514	AA			0 OHM 1/4W
J012	92L30110000514	AA			0 OHM 1/4W
J014	92L30120000518	AA			0 OHM 1/8W
J016	92L30120000518	AA			0 OHM 1/8W
J050	92L40300007500				0 OHM (7.5 mm)
J059	92L40300012500				0 OHM (7.5 mm)
J061	92L40300007500				0 OHM (7.5 mm)
J062	92L40300007500				0 OHM (7.5 mm)
J1	92L40300012500				0 OHM (12.5 mm)
J2	92L40300007500				0 OHM (7.5 mm)
J3	92L40300010000				0 OHM (10 mm)
J4	92L30110000514	AA			0 OHM 1/4W
J5	92L40300015000				0 OHM (15 mm)
J5	92L30110000514	AA			0 OHM 1/4W
J35	92L40300007500				0 OHM (7.5 mm)
J101	92L30120000518	AA			0 OHM 1/8W
J102	92L30110000514	AA			0 OHM 1/4W
J103	92L30110000514	AA			0 OHM 1/4W
J104	92L30110000514	AA			0 OHM 1/4W
J105	92L30110000514	AA			0 OHM 1/4W
J106	92L30110000514	AA			0 OHM 1/4W
J107	92L30110000514	AA			0 OHM 1/4W
J108	92L30110000514	AA			0 OHM 1/4W
J109	92L30110000514	AA			0 OHM 1/4W
J110	92L30110000514	AA			0 OHM 1/4W
J111	92L30110000514	AA			0 OHM 1/4W
J112	92L30110000514	AA			0 OHM 1/4W
J113	92L30110000514	AA			0 OHM 1/4W
J114	92L30110000514	AA			0 OHM 1/4W
J115	92L30110000514	AA			0 OHM 1/4W
J121	92L30110000514	AA			0 OHM 1/4W
J127	92L30110000514	AA			0 OHM 1/4W
J128	92L30110000514	AA			0 OHM 1/4W
J129	92L30110000514	AA			0 OHM 1/4W
J130	92L30110000514	AA			0 OHM 1/4W
J131	92L30120000518	AA			0 OHM 1/8W
J132	92L30120000518	AA			0 OHM 1/8W
J133	92L30110000514	AA			0 OHM 1/4W
J135	92L30110000514	AA			0 OHM 1/4W
J136	92L30110000514	AA			0 OHM 1/4W
J137	92L30120000518	AA			0 OHM 1/8W
J138	92L30110000514	AA			0 OHM 1/4W
J141	92L30110000514	AA			0 OHM 1/4W
J142	92L30110000514	AA			0 OHM 1/4W
J143	92L30110000514	AA			0 OHM 1/4W
J144	92L30120000518	AA			0 OHM 1/8W
J146	92L30120000518	AA			0 OHM 1/8W
J147	92L30110000514	AA			0 OHM 1/4W
J149	92L30110000514	AA			0 OHM 1/4W
J150	92L30110000514	AA			0 OHM 1/4W
J153	92L30120000518	AA			0 OHM 1/8W
J155	92L30110000514	AA			0 OHM 1/4W
J156	92L30110000514	AA			0 OHM 1/4W
J226	92L30110000514	AA			0 OHM 1/4W
J301	92L40300010000				0 OHM (10 mm)
J302	92L40300010000				0 OHM (10 mm)
J303	92L40300012500				0 OHM (12.5 mm)
J304	92L40300015000				0 OHM (15 mm)
J306	92L40300007500				0 OHM (7.5 mm)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] RESISTORS					
J307	92L40300012500				0 OHM (12.5 mm)
J308	92L40300012500				0 OHM (12.5 mm)
J309	92L40300007500				0 OHM (7.5 mm)
J310	92L40300007500				0 OHM (7.5 mm)
J311	92L40300007500				0 OHM (7.5 mm)
J312	92L40300007500				0 OHM (7.5 mm)
J313	92L40300010000				0 OHM (10 mm)
J314	92L40300010000				0 OHM (10 mm)
J315	92L40300015000				0 OHM (15 mm)
J316	92L40300010000				0 OHM (10 mm)
J317	92L40300010000				0 OHM (10 mm)
J318	92L40300012500				0 OHM (12.5 mm)
J319	92L40300010000				0 OHM (10 mm)
J320	92L40300010000				0 OHM (10 mm)
J321	92L40300015000				0 OHM (15 mm)
J322	92L40300015000				0 OHM (15 mm)
J323	92L40300005500				0 OHM (5.5 mm)
J324	92L40300010000				0 OHM (10 mm)
J325	92L40300010000				0 OHM (10 mm)
J326	92L40300010000				0 OHM (10 mm)
J327	92L40300010000				0 OHM (10 mm)
J328	92L40300010000				0 OHM (10 mm)
J329	92L40300010000				0 OHM (10 mm)
J330	92L40300010000				0 OHM (10 mm)
J331	92L40300010000				0 OHM (10 mm)
J332	92L40300010000				0 OHM (10 mm)
J333	92L40300010000				0 OHM (10 mm)
J334	92L40300007500				0 OHM (7.5 mm)
J335	92L40300010000				0 OHM (10 mm)
J336	92L40300010000				0 OHM (10 mm)
J337	92L40300007500				0 OHM (7.5 mm)
J338	92L40300007500				0 OHM (7.5 mm)
J339	92L40300007500				0 OHM (7.5 mm)
J340	92L40300007500				0 OHM (7.5 mm)
J342	92L40300005500				0 OHM (5.5 mm)
J343	92L40300015000				0 OHM (15 mm)
J344	92L40300010000				0 OHM (10 mm)
J702	92L40300010000				0 OHM (10 mm)
JP901	92L30110000514	AA			0 OHM 1/4W
JP902	92L30110000514	AA			0 OHM 1/4W
JP903	92L30110000514	AA			0 OHM 1/4W
JP904	92L30110000514	AA			0 OHM 1/4W
JP905	92L30110000514	AA			0 OHM 1/4W
JP906	92L30110000514	AA			0 OHM 1/4W
JP907	92L30110000514	AA			0 OHM 1/4W
JP908	92L30110000514	AA			0 OHM 1/4W
JP909	92L30110000514	AA			0 OHM 1/4W
JP910	92L30110000514	AA			0 OHM 1/4W
JP911	92L30110000514	AA			0 OHM 1/4W
JP912	92L30110000514	AA			0 OHM 1/4W
JP913	92L30110000514	AA			0 OHM 1/4W
JP914	92L30110000514	AA			0 OHM 1/4W
JP915	92L30110000514	AA			0 OHM 1/4W
JP916	92L30110000514	AA			0 OHM 1/4W
JP917	92L30110000514	AA			0 OHM 1/4W
JP918	92L30110000514	AA			0 OHM 1/4W
JP919	92L30110000514	AA			0 OHM 1/4W
JP920	92L30110000514	AA			0 OHM 1/4W
JP921	92L30110000514	AA			0 OHM 1/4W
JP922	92L30110000514	AA			0 OHM 1/4W
JP923	92L30110000514	AA			0 OHM 1/4W
JP924	92L30110000514	AA			0 OHM 1/4W
JP925	92L30110000514	AA			0 OHM 1/4W
JP926	92L30110000514	AA			0 OHM 1/4W
JP927	92L30110000514	AA			0 OHM 1/4W
JP928	92L30110000514	AA			0 OHM 1/4W
JP929	92L30110000514	AA			0 OHM 1/4W
JP930	92L30110000514	AA			0 OHM 1/4W
JP931	92L30110000514	AA			0 OHM 1/4W
L13	92L30131101516	AA			100 OHM 1/16W 0603
L708	92L40300005000	AA			0 OHM (5mm)
R0	92L30130000516	AA			0 OHM 1/16W
R1	92L30132332516				3.3 KOHM 1/16W
R2	92L30130000516	AA			0 OHM 1/16W
R4	92L30132102516	AA			1 KOHM 1/16W
R5	92L30130000516	AA			0 OHM 1/16W
R6	92L30132102516	AA			1 KOHM 1/16W
R7	92L30132102516	AA			1 KOHM 1/16W
R8	92L30133473516	AA			47 KOHM 1/16W
R9	92L30132102516	AA			1 KOHM 1/16W
R10	92L30133473516	AA			47 KOHM 1/16W
R11	92L30133473516	AA			47 KOHM 1/16W
R12	92L30133153516	AA			15 KOHM 1/16W
R13	92L30133153516	AA			15 KOHM 1/16W
R16	92L30132102516	AA			1 KOHM 1/16W
R17	92L30133473516	AA			47 KOHM 1/16W
R18	92L30130000516	AA			0 OHM 1/16W
R19	92L30134104516	AA			100 KOHM 1/16W
R20	92L30133473516	AA			47 KOHM 1/16W

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] RESISTORS					
R21	92L30130000516	AA			0 OHM 1/16W
R22	92L30130000516	AA			0 OHM 1/16W
R23	92L30133103516	AA			10 KOHM 1/16W
R24	92L30130000516	AA			0 OHM 1/16W
R25	92L30133103516	AA			10 KOHM 1/16W
R26	92L30134104516	AA			100 KOHM 1/16W
R26	92L30130000516	AA			0 OHM 1/16W
R27	92L30130000516	AA			0 OHM 1/16W
R28	92L30130000516	AA			0 OHM 1/16W
R29	92L30132102516	AA			1 KOHM 1/16W
R30	92L30130000516	AA			0 OHM 1/16W
R31	92L30130000516	AA			0 OHM 1/16W
R32	92L30132102516	AA			1 KOHM 1/16W
R33	92L30132102516	AA			1 KOHM 1/16W
R34	92L30133103516	AA			10 KOHM 1/16W
R35	92L30130000516	AA			0 OHM 1/16W
R36	92L30130000516	AA			0 OHM 1/16W
R37	92L30130000516	AA			0 OHM 1/16W
R38	92L30130000516	AA			0 OHM 1/16W
R39	92L30130000516	AA			0 OHM 1/16W
R40	92L30130000516	AA			0 OHM 1/16W
R49	92L30133473516	AA			47 KOHM 1/16W
R50	92L30133473516	AA			47 KOHM 1/16W
R52	92L30133473516	AA			47 KOHM 1/16W
R55	92L30132472116				4.7 KOHM 1/16W
R56	92L30132472116				4.7 KOHM 1/16W
R60	92L30133103516	AA			10 KOHM 1/16W
R64	92L30133103516	AA			10 KOHM 1/16W
R65	92L30133473516	AA			47 KOHM 1/16W
R67	92L30133473516	AA			47 KOHM 1/16W
R68	92L30133473516	AA			47 KOHM 1/16W
R69	92L30133473516	AA			47 KOHM 1/16W
R101	92L30123563518				56 KOHM 1/16W
R104	92L30123103518	AA			10 KOHM 1/8W
R105	92L30123103518	AA			10 KOHM 1/8W
R106	92L30121681518				680 OHM 1/8W
R107	92L30121681518				680 OHM 1/8W
R108	92L30123333518	AA			33 KOHM 1/8W
R109	92L30123103518	AA			10 KOHM 1/8W
R110	92L30122102518	AA			1 KOHM 1/8W
R111	92L30124154518				150 KOHM 1/8W
R117	92L30120100518				10 OHM 1/8W
R118	92L30121101518	AA			100 OHM 1/8W
R119	92L30122332518				3.3 KOHM 1/8W
R120	92L30122122518				1.2 KOHM 1/8W
R121	92L30120100518				10 OHM 1/8W
R122	92L30120100518				10 OHM 1/8W
R123	92L30120000518	AA			0 OHM 1/8W
R124	92L30124154518				150 KOHM 1/8W
R125	92L30121681518				680 OHM 1/8W
R126	92L30121681518				680 OHM 1/8W
R127	92L30121221518				220 OHM 1/8W
R128	92L30120100518				10 OHM 1/8W
R129	92L30122102518	AA			1 KOHM 1/8W
R130	92L30122102518	AA			1 KOHM 1/8W
R131	92L30122102518	AA			1 KOHM 1/8W
R133	92L30123103518	AA			10 KOHM 1/8W
R138	92L30122222518				2.2 KOHM 1/8W
R139	92L30122272518				2.7 KOHM 1/8W
R140	92L30122222518				2.2 KOHM 1/8W
R141	92L30122472518				4.7 KOHM 1/8W
R142	92L30122472518				4.7 KOHM 1/8W
R143	92L30123103518	AA			10 KOHM 1/8W
R144	92L30123103518	AA			10 KOHM 1/8W
R145	92L30121221518				220 OHM 1/8W
R146	92L30122222518				2.2 KOHM 1/8W
R147	92L30120470518				47 OHM 1/8W
R151	92L30122102518	AA			1 KOHM 1/8W
R152	92L30121471518				470 OHM 1/8W
R153	92L30125105518				1 MOHM 1/8W
R154	92L30120910518				91 OHM 1/8W
R164	92L30123103518	AA			10 KOHM 1/8W
R166	92L30122102518	AA			1 KOHM 1/8W
R201	92L30123473518	AA			47 KOHM 1/8W
R202	92L30124474518	AA			470 KOHM 1/8W
R203	92L30123473518	AA			47 KOHM 1/8W
R204	92L30122822518	AA			8.2 KOHM 1/8W
R205	92L30122562518	AA			5.6 KOHM 1/8W
R206	92L30122682518	AA			6.8 KOHM 1/8W
R207	92L30120270518	AA			27 OHM 1/8W
R208	92L30122682518	AA			6.8 KOHM 1/8W
R209	92L30122822518	AA			8.2 KOHM 1/8W
R210	92L30120270518	AA			27 OHM 1/8W
R211	92L30122562518	AA			5.6 KOHM 1/8W
R214	92L30122152518	AA			1.5 KOHM 1/8W
R215	92L30122152518	AA			1.5 KOHM 1/8W
R216	92L30123223518	AA			22 KOHM 1/8W
R219	92L30121101518	AA			100 OHM 1/8W
R220	92L30123103518	AA			10 KOHM 1/8W

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] RESISTORS					
R221	92L30123103518	AA			10 KOHM 1/8W
R222	92L30122222518				2.2 KOHM 1/8W
R223	92L30122222518				2.2 KOHM 1/8W
R224	92L30122102518	AA			1 KOHM 1/8W
R225	92L30122392518	AA			3.9 KOHM 1/8W
R229	92L30122392518	AA			3.9 KOHM 1/8W
R264	92L30121821518	AA			100 OHM 1/8W
R265	92L30121821518	AA			100 OHM 1/8W
R301	92L00101121518	AA			120 OHM 1/8W
R302	92L00101121518	AA			120 OHM 1/8W
R303	92L00100022518	AA			2.2 OHM 1/8W
R304	92L00101181518	AA			180 OHM 1/8W
R305	92L00102222518	AA			2.2 KOHM 1/8W
R306	92L00102822518	AA			8.2 KOHM 1/8W
R307	92L00102822518	AA			8.2 KOHM 1/8W
R308	92L00102222518	AA			2.2 KOHM 1/8W
R309	92L00101181518				180 OHM 1/8W
R310	92L00102222518	AA			2.2 KOHM 1/8W
R311	92L00102222518	AA			2.2 KOHM 1/8W
R320	92L00103103518	AA			10 KOHM 1/8W
R321	92L00102472518	AA			4.7 KOHM 1/8W
R322	92L00100022518	AA			2.2 OHM 1/8W
R323	92L00102392518	AA			3.9 KOHM 1/8W
R324	92L00102102518	AA			1 KOHM 1/8W
R325	92L00102102518	AA			1 KOHM 1/8W
R326	92L00102392518	AA			3.9 KOHM 1/8W
R328	92L00102102518	AA			1 KOHM 1/8W
R329	92L00102332518	AA			3.3 KOHM 1/8W
R330	92L00103203518				20 KOHM 1/8W
R331	92L00103123518	AA			12 KOHM 1/8W
R332	92L00102222518	AA			2.2 KOHM 1/8W
R333	92L00102222518	AA			2.2 KOHM 1/8W
R334	92L00103103518	AA			10 KOHM 1/8W
R335	92L00104154518				150 KOHM 1/8W
R337	92L00103203518				20 KOHM 1/8W
R338	92L00102102518	AA			1 KOHM 1/8W
R339	92L00102102518	AA			1 KOHM 1/8W
R340	92L00103103518	AA			10 KOHM 1/8W
R341	92L00104154518				150 KOHM 1/8W
R342	92L00103203518				20 KOHM 1/8W
R343	92L00103123518	AA			12 KOHM 1/8W
R344	92L00102562518	AA			5.6 KOHM 1/8W
R345	92L00102562518	AA			5.6 KOHM 1/8W
R346	92L00103303518				30 KOHM 1/8W
R347	92L00103203518				20 KOHM 1/8W
R348	92L00102332518	AA			3.3 KOHM 1/8W
R349	92L00102102518	AA			1 KOHM 1/8W
R402	92L00102472518	AA			4.7 KOHM 1/8W
R403	92L00102272518	AA			2.7 KOHM 1/8W
R404	92L00102222518	AA			2.2 KOHM 1/8W
R406	92L00103473518	AA			47 KOHM 1/8W
R407	92L00103103518	AA			10 KOHM 1/8W
R408	92L00102272518	AA			2.7 KOHM 1/8W
R409	92L00102472518	AA			4.7 KOHM 1/8W
R410	92L00100047514				4.7 OHM 1/4W
R411	92L00100022512				2.2 OHM 1/2W
R412	92L00101471514	AA			470 OHM 1/4W
R413	92L00103103518	AA			10 KOHM 1/8W
R414	92L00102472518	AA			4.7 KOHM 1/8W
R415	92L00101471518	AA			470 OHM 1/8W
R416	92L00101471514	AA			470 OHM 1/4W
R417	92L00100022514				2.2 OHM 1/4W
R418	92L00100047518				4.7 OHM 1/8W
R419	92L00101471518	AA			470 OHM 1/8W
R420	92L00102222518	AA			2.2 KOHM 1/8W
R421	92L00102222518	AA			2.2 KOHM 1/8W
R422	92L00102102518	AA			1 KOHM 1/8W
R423	92L00102222518	AA			2.2 KOHM 1/8W
R424	92L00103303518				30 KOHM 1/8W
R425	92L00103103518	AA			10 KOHM 1/8W
R426	92L00102102518	AA			1 KOHM 1/8W
R427	92L00102472518	AA			4.7 KOHM 1/8W
R428	92L00102472518	AA			4.7 KOHM 1/8W
R429	92L00101471518	AA			470 OHM 1/8W
R430	92L00102102518	AA			1 KOHM 1/8W
R431	92L00103103518	AA			10 KOHM 1/8W
R432	92L00102222518	AA			2.2 KOHM 1/8W
R433	92L00103203518				20 KOHM 1/8W
R434	92L00102222518	AA			2.2 KOHM 1/8W
R435	92L00103103518	AA			10 KOHM 1/8W
R436	92L00102102518	AA			1 KOHM 1/8W
R437	92L00102102518	AA			1 KOHM 1/8W
R438	92L40300007500				0 OHM (7.5 mm)
R439	92L00103103518	AA			10 KOHM 1/8W
R440	92L00102102518	AA			1 KOHM 1/8W
R441	92L40300010000				0 OHM (10 mm)
R442	92L00102102518	AA			1 KOHM 1/8W
R501	92L00103103518	AA			10 KOHM 1/8W
R502	92L00103103518	AA			10 KOHM 1/8W

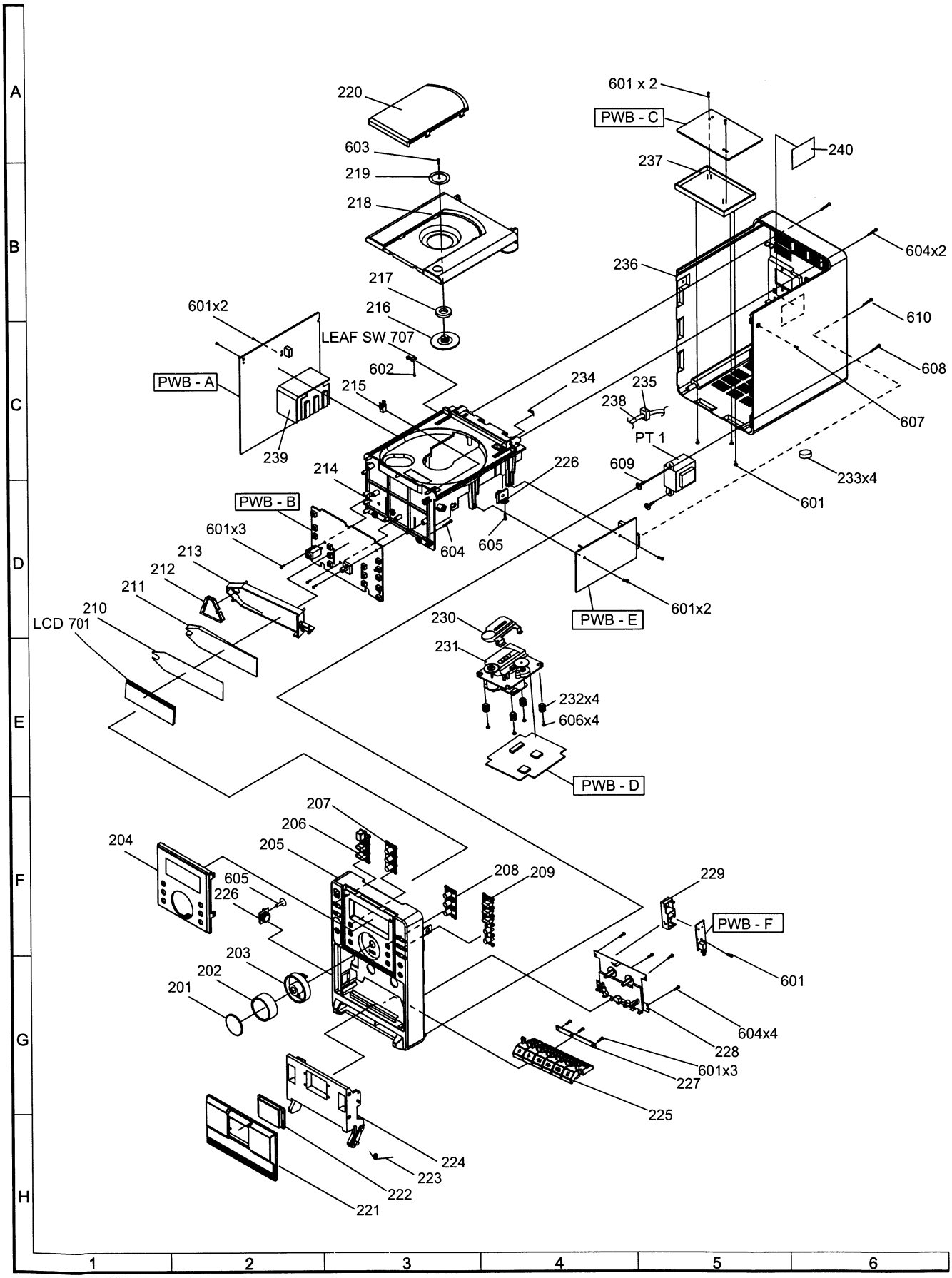
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] RESISTORS					
R503	92L00103103518	AA			10 KOHM 1/8W
R504	92L00100470518	AA			47 OHM 1/8W
R505	92L00103473518	AA			47 KOHM 1/8W
R506	92L00102472518	AA			4.7 KOHM 1/8W
R507	92L00102472518	AA			4.7 KOHM 1/8W
R508	92L00102222518	AA			2.2 KOHM 1/8W
R509	92L00102222518	AA			2.2 KOHM 1/8W
R510	92L00102222518	AA			2.2 KOHM 1/8W
R511	92L00102102518	AA			1 KOHM 1/8W
R512	92L00102102518	AA			1 KOHM 1/8W
R513	92L00102102518	AA			1 KOHM 1/8W
R514	92L00102102518	AA			1 KOHM 1/8W
R515	92L00100100518	AA			10 OHM 1/8W
R516	92L00100100518	AA			10 OHM 1/8W
R517	92L00100100518	AA			10 OHM 1/8W
R518	92L00100100518	AA			10 OHM 1/8W
R519	92L00102102518	AA			1 KOHM 1/8W
R520	92L00100220518	AA			22 OHM 1/8W
R521	92L00101101518	AA			100 OHM 1/8W
R522	92L00101101518	AA			100 OHM 1/8W
R523	92L00100100518	AA			10 OHM 1/8W
R524	92L00100100518	AA			10 OHM 1/8W
R525	92L00100100518	AA			10 OHM 1/8W
R527	92L00103103518	AA			10 KOHM 1/8W
R528	92L00102272518	AA			2.7 KOHM 1/8W
R529	92L00101101518	AA			100 OHM 1/8W
R530	92L00102102518	AA			1 KOHM 1/8W
R535	92L00103473518	AA			47 KOHM 1/8W
R536	92L00100100518	AA			10 OHM 1/8W
R537	92L00101101518	AA			100 OHM 1/8W
R538	92L00102102518	AA			1 KOHM 1/8W
R539	92L00102102518	AA			1 KOHM 1/8W
R540	92L00102102518	AA			1 KOHM 1/8W
R541	92L00102222518	AA			2.2 KOHM 1/8W
R542	92L00103103518	AA			10 KOHM 1/8W
R543	92L00103103518	AA			10 KOHM 1/8W
R544	92L00103103518	AA			10 KOHM 1/8W
R545	92L00103103518	AA			10 KOHM 1/8W
R701	92L00103123518	AA			12 KOHM 1/8W
R703	92L00103123518	AA			12 KOHM 1/8W
R704	92L00103273518				27 KOHM 1/8W
R705	92L00102822518	AA			8.2 KOHM 1/8W
R706	92L00103473518	AA			47 KOHM 1/8W
R707	92L00102222518	AA			2.2 KOHM 1/8W
R708	92L00103273518				27 KOHM 1/8W
R709	92L00102822518	AA			8.2 KOHM 1/8W
R710	92L00102362518	AA			3.6 KOHM 1/8W
R711	92L00102102518	AA			1 KOHM 1/8W
R712	92L00102562518	AA			5.6 KOHM 1/8W
R713	92L00101101518	AA			100 OHM 1/8W
R714	92L00103823518	AA			82 KOHM 1/8W
R715	92L00104204518				200 KOHM 1/8W
R716	92L00103473518	AA			47 KOHM 1/8W
R717	92L00102102518	AA			1 KOHM 1/8W
R801	92L30121101518	AA			100 OHM 1/8W
R802	92L30120056518	AA			5.6 OHM 1/8W
R803	92L30123103518	AA			10 KOHM 1/8W
R804	92L30123153518	AA			15 KOHM 1/8W
R900	92L30131101516	AA			100 OHM 1/16W
R901	92L30131101516	AA			100 OHM 1/16W
R903	92L30134104516	AA			100 KOHM 1/16W
R904	92L30133223516	AA			22 KOHM 1/16W
R905	92L30130022516	AA			2.2 OHM 1/16W
R906	92L30133123516	AA			12 KOHM 1/16W
R911	92L30131331516	AA			330 OHM 1/16W
R912	92L30133223516	AA			22 KOHM 1/16W
R913	92L30131101516	AA			100 OHM 1/16W
R915	92L30133223516	AA			22 KOHM 1/16W
R916	92L30132102516	AA			1 KOHM 1/16W
R917	92L30133123516	AA			12 KOHM 1/16W
R918	92L30133123516	AA			12 KOHM 1/16W
R919	92L30132302516	AA			3 KOHM 1/16W
R920	92L30133223516	AA			22 KOHM 1/16W
R921	92L30133103516	AA			10 KOHM 1/16W
R922	92L30133103516	AA			10 KOHM 1/16W
R923	92L30132102516	AA			1 KOHM 1/16W
R924	92L30132102516	AA			1 KOHM 1/16W
R925	92L30130100516	AA			10 OHM 1/16W
R926	92L30130820516	AA			82 OHM 1/16W
R927	92L30132102516	AA			1 KOHM 1/16W
R928	92L30133103516	AA			10 KOHM 1/16W
R929	92L30133103516	AA			10 KOHM 1/16W
R930	92L30133683516	AA			68 KOHM 1/16W
R931	92L30133103516	AA			10 KOHM 1/16W
R932	92L30133103516	AA			10 KOHM 1/16W
R933	92L30133133516	AA			13 KOHM 1/16W
R934	92L30133133516	AA			13 KOHM 1/16W
R935	92L30133103516	AA			10 KOHM 1/16W
R936	92L30133133516	AA			13 KOHM 1/16W

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] RESISTORS					
R937	92L30133103516	AA			10 KOHM 1/16W
R938	92L30133683516	AA			68 KOHM 1/16W
R939	92L30133133516	AA			13 KOHM 1/16W
R943	92L30132472516	AA			4.7 KOHM 1/16W
R944	92L30134154516	AA			150 KOHM 1/16W
R945	92L30135105516	AA			1 MOHM 1/16W
R946	92L30132432516	AA			4.3 KOHM 1/16W
R947	92L30130100516	AA			10 OHM 1/16W
R950	92L30133333516	AA			33 KOHM 1/16W
R951	92L30133333516	AA			33 KOHM 1/16W
R952	92L30133333516	AA			33 KOHM 1/16W
R954	92L30133333516	AA			33 KOHM 1/16W
R955	92L30130000516	AA			0 OHM 1/16W
R963	92L30130000516	AA			0 OHM 1/16W
R992	92L30130022516	AA			2.2 OHM 1/16W
R993	92L30130022516	AA			2.2 OHM 1/16W
R994	92L30131101516	AA			100 OHM 1/16W
R995	92L30131101516	AA			100 OHM 1/16W
R999	92L30131101516	AA			100 OHM 1/16W
R1101	92L00103223518	AA			22 KOHM 1/8W
R1102	92L00103223518	AA			22 KOHM 1/8W
X101	92L30114104514	AA			100 KOHM 1/4W
[10] OTHER CIRCUITRY PARTS					
CN101	92L23304120020	AB			Plug,4 Pin
CN102	92L23305120020				Plug,5 Pin
CN201	92L23304120020	AB			Plug,4 Pin
CN202	92L23310120020	AC			Plug,10 Pin
CN301	92L23305020025	AB			Plug,5 Pin
CN302	92L24405260500				Connector Ass'y,5 Pin with CNS302
CN401	92L23302020025				Plug,2 Pin
CN402	92L23303020020	AB			Plug,3 Pin
CN404	92L23303020025	AB			Plug,3 Pin
CN405	92L244A0324500				Connector Ass'y,3 Pin with CNS405
CN406	92L23302015080				Plug,2 Pin
CN407	92L23302008040				Plug,2 Pin
CN501	92L23310020020				Plug,10 Pin
CN502	92L24410260000	AH			Connector Ass'y,4 Pin with CNS502
CN503	92L244A0526050				Connector Ass'y,5 Pin with CNS503
CN701	92L23216019010	AE			Plug,16 Pin
CN702	92L244A0526000				Connector Ass'y,6 Pin with CNS702
CN703	92L24405280010				Connector Ass'y,5 Pin with CNS703
CN706	92L23216019010	AE			Plug,16 Pin
CN707	92L23302020020	AB			Plug,2 Pin
CN901	92L23305120020				Plug,5 Pin
CN902	92L23216019010	AE			Plug,16 Pin
CN903	92L23306120020	AB			Plug,6 Pin
CNS201	92L23420080450	AF			Connector Ass'y,4 Pin
CNS202	92L24410260000	AH			Connector Ass'y,10 Pin with CNS501
CNS402	92L23403010000				Connector Ass'y,3 Pin
CNS707	92L23434180200				Connector Ass'y,2 Pin
FFC701	92L23516018010				FFC Cable,16 Pin
FFC902	92L23516009010	AD			FFC Cable,16 Pin
FS1101	92L23190231553				Fuse, 3.15A / 250V
FS1102	92L23190140059				Fuse, 400mA / 250V
JK102	92L24200000475				Antenna Jack
JK301	92L24220040888				Speaker Jack
JK302	92L24013528002				DC Jack
LCD701	92L22010693161				LCD Display
RY401	92L28032061040				Relay
SW201	92L21866220597				Recording Switch
SW301	92L21912220309				Slide Switch
SW302	92L21704070700				Reset Switch
SW701	92L21706065000	AC			Switch, Key Type (Power ON / Standby)
SW702	92L21706065000	AC			Switch, Key Type (Sleep)
SW703	92L21706065000	AC			Switch, Key Type (Clock / Timer)
SW704	92L21706065000	AC			Switch, Key Type (Memory / Display)
SW705	92L21706065000	AC			Switch, Key Type (Tuning Up / Folder Up)
SW706	92L21706065000	AC			Switch, Key Type (Tuning Down / Folder Down)
SW707	92L21706065000	AC			Switch, Key Type (Stop)
SW707A	92L21720003550				CD Door Leaf Switch
SW708	92L21706065000	AC			Switch, Key Type (Disc Track Up / Fast Forward / Tuner Preset Up / Timer Up)
SW709	92L21706065000	AC			Switch, Key Type (Disc Track Down / Fast Reverse / Tuner Preset Down / Timer Down)
SW710	92L21706065000	AC			Switch, Key Type (Extra Bass)
SW711	92L21706065000	AC			Switch, Key Type (Equaliser)
SW712	92L21706065000	AC			Switch, Key Type (Tape)
SW713	92L21706065000	AC			Switch, Key Type (Tuner [Band])
SW714	92L21706065000	AC			Switch, Key Type (CD Play / Pause)
SW901	92L21720005300				CD Switch
TM1	92L23726015022				Single Wire
VR701	92L27012152423				Rotary Encoder
WIR1	92L23724150012				FM Lug Wire

-MEMO-

XL-MP2H

[11] CABINET PARTS



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[11] CABINET PARTS					
201	92L57104100000				DECK CIRCLE
202	92L5MP2074XX00				VOLUME KNOB
203	92L5MP2904XX00				VOLUME KNOB RING
204	92L5MP28040010				DISPLAY LENS
205	92L5MP2012XX10				FRONT CABINET
206	92L5MP2512XX00				FUNCTION-KNOB (LEFT))
207	92L5MP2502XX00				FUNCTION-KNOB (LEFT-M)
208	92L5MP2508XX00				FUNCTION-KNOB (RIGHT-M)
209	92L5MP2518XX00				FUNCTION-KNOB (RIGHT)
210	92L46608802900				BACK LIGHT PLATE
211	92L58808050000				TRANSPARENT BACK PLATE VC-88X
212	92L5MP23100000				LCD BRACKET COVER
213	92L5MP23106400				LCD BRACKET
214	92L5140470XX00				CD TRAY
215	92L84620900000				CD DOOR LOCK
216	92L50010000000				CD CHUCK A
217	92L47330016000	AD			CD MAGNET RING 30x16x5mm
218	92L5140490XX00				CD DOOR
219	92L50027611000				CD CHUCK M
220	92L5140440XX10				CD DOOR COVER
221	92L5MP2030XX10				CASSETTE DOOR
222	92L5MP2720XX00				CASSETTE DOOR LENS
223	92L76672880000				CASSETTE DOOR SPRING
224	92L5MP22900000				CASSETTE DOOR BRACKET
225	92L5MP2100XX90				CASSETTE CONTROL KNOB
226	92L53912110000	AC			GEAR FOR CASSETTE DOOR / CD DOOR
227	92L46338000000				CASSETTE KNOB PLATE
228	92L15648213934				CASS DECK HY-21F-034 SEMI-AUTO
229	92L52092840000				DECK BRACKET
230	92L50099111000	AD			CD MEDHANISM COVER
231	92L35611600091	BD			CD DECK MECHANISM
232	92L45832884020				RUBBER SILICON(BLACK) HARDNESS
233	92L45802312500	AB			RUBBER FOOT , DIA. 2.3x12.5mm
234	92L47977000000	AC			SPRING FOR CD DOOR
235	92L53002620000				POWER LINE HOLDER (STAND)
236	92L5140020XX00				BACK CABINET
237	92L5MP22760000				SMALL TRANSFORMER BRACKET
⚠ 238	92L15124000102				POWER CORD SET (BLACK)
239	92L40804303050				HEAT SINK 43x30x2.5mm VS30
240	92L61308007200				CAUTION LABEL
601	92L23813008002	AA			SCREW ST 3 x 8 mm PB
602	92L23812006002	AA			SCREW ST 2 x 6 mm PB BLACK
603	92L23812006002	AA			SCREW ST 2 x 6 mm BB
604	92L23813010002	AA			SCREW ST 3 x 10 mm PB
605	92L23813010031				SCREW ST 3 x 10 PWB
606	92L23812608031	AA			SCREW ST 2.6 x 8 mm PWB
607	92L23813008002	AA			SCREW ST 3 x 8 mm KB
608	92L23813025002	AA			SCREW ST 3 x 25 mm PB
609	92L23813020032	AA			SCREW ST 3 x 20 mm PWB
610					SCREW ST 2.8 x 12 mm PB

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[12] ACCESSORIES/PACKING PARTS					
1	92L16519080000				AM EXTERNAL ANTENNA LOOP
2	92L291000S7060				REMOTE CONTROL
3	92L601LMP20010				OPERATION MANUAL
4	----------				BATTERY (NOT REPLACEMENT ITEM)
5	92L669MP2XXX00				WOOD SPEAKER BOX BACK
6	92L874MP200100				PULP TOP COVER
7	92L874MP200200				PULP BOTTOM COVER
8	92L891MP200110				PACKING CASE
9	92L67840038050				POLY BAG
[13] P.W.B. ASSEMBLY (Not Replacement Item)					
PWB-A	92L248MP200231	-			AUDIO
PWB-B	92L248MP200300	-			CONTROL
⚠ PWB-C	92L248MP201200	-			RECTIFIER
PWB-D	92L248UH4L0229	-			CD
PWB-E	92L248DA140123	-			TUNER
PWB-F	92L248STDS1308	-			TAPE
[14] OTHER SERVICE PARTS					
	UDSKA0004AFZZ	AZ			CD Optical Pickup Lens Cleaner Disc

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. No.
3. PART NO.
4. DESCRIPTION

★ MARK: SPARE PARTS-DELIVERY SECTION

For U.S.A. only

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Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

VCC ..... Ceramic type
VCK..... Ceramic type
VCT ..... Semiconductor type
VC • • MF ..... Cylindrical type (without lead wire)
VC • • MN..... Cylindrical type (without lead wire)
VC • • TV..... Square type (without lead wire)
VC • • TQ ..... Square type (without lead wire)
VC • • CY ..... Square type (without lead wire)
VC • • CZ ..... Square type (without lead wire)
VC • • • • • • • • • J .. The 13th character represents capacity difference.
("J" ±5%, "K" ±10%, "M" ±20%, "N" ±30%,
"C" ±0.25 pF, "D" ±0.5 pF, "Z" +80-20%.)

If there are no indications for the electrolytic capacitors, error is ±20%.

Resistors

VRD ..... Carbon-film type
VRS..... Carbon-film type
VRN ..... Metal-film type
VR • • MF ..... Cylindrical type (without lead wire)
VR • • MN..... Cylindrical type (without lead wire)
VR • • TV..... Square type (without lead wire)
VR • • TQ ..... Square type (without lead wire)
VR • • CY ..... Square type (without lead wire)
VR • • CZ ..... Square type (without lead wire)
VR • • • • • • • • • J .. The 13th character represents error.
("J" ±5%, "F" ±1%, "D" ±0.5%.)

If there are no indications for other parts, the resistors are ±5% carbon-film type.